# Technical Service Bulletin

| SUBJECT: ACCESSORY REMOTE ENGINE START | | | No: TSB–11–66–001 |
|---|---|---|---|
| | | | DATE: October, 2011 |
| | | | MODEL: See below |
| **CIRCULATE TO**: | [ ] GENERAL MANAGER | [ X ] PARTS MANAGER | [ X ] TECHNICIAN |
| [ X ] SERVICE ADVISOR | [ X ] SERVICE MANAGER | [ ] WARRANTY PROCESSOR | [ ] SALES MANAGER |

## PURPOSE

This TSB contains technical information and troubleshooting for the accessory Remote Engine Start system for affected vehicles.

## AFFECTED VEHICLES

The following vehicles ***except manual transmission models:***

2009–2011 Endeavor
2010–2012 Eclipse/Eclipse Spyder
2009.5–2012 Galant
2009–2011 Lancer
2010–2011 Lancer Sportback
2009–2012 Outlander
2011–2012 Outlander Sport

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## OVERVIEW

Remote engine start allows starting the engine from a distance, before entering the vehicle. Use the Remote Engine Start transmitter to start or stop the engine. The engine will idle for a preset period of time (5, 10, 20 or 30 minutes), or when specific conditions are detected. The factory default is 10 minutes.

For remote starting to occur, the following requirements must be met:

- Transmission in P (Park)
- All doors closed, including liftgate/trunk. (Door locking/unlocking is not affected by remote start.)
- Engine hood closed

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- Key removed from ignition (for KOS equipped vehicles, the ignition switch is in the LOCK position)
- Transmitter within approximately 150 feet of the vehicle

After the engine is started with the Remote Engine Start transmitter, it will stop if any of the following conditions are detected:

- A door (or liftgate/trunk) is opened
- The accelerator pedal is pressed (except Endeavor, Galant and Eclipse models)
- The engine hood is opened.
- The key is inserted into the ignition switch (for KOS vehicles, the ignition switch is turned from the LOCK position).

## Remote Engine Start Kits and Transmitters

| Model | Affected Vehicles | Part Number |
|---|---|---|
| 2009.5 – 2012 Galant | VIN 9E024751 and above | MZ360271EX / MZ360360EX * |
| 2010 Eclipse/Eclipse Spyder | From start of 2010MY production | MZ360271EX / MZ360360EX * |
| 2009 – 2011 Endeavor | From start of 2009MY production | MZ360271EX / MZ360360EX * |
| 2009 Lancer | From start of 2009MY production | MZ360272EX |
| 2010 – 2011 Lancer | After June 1, 2008 production | MZ360340EX |
| 2010 – 2011 Lancer Sportback | From start of 2010MY production | MZ360340EX |
| 2009 Outlander | From start of 2009MY production | MZ360272EX |
| 2010 – 2012 Outlander | From start of 2010MY production | MZ360340EX |
| 2011 – 2012 Outlander Sport | From start of 2011MY production | MZ360340EX |

***** MZ360360EX is a mid-year replacement of the MZ360271EX remote engine start kit.

Older transmitter
Part number MZ360300EX
– Provided with MZ360271EX and MZ360272EX kits

Newer transmitter
Part number MZ360361EX
– Provided with MZ360360EX and MZ360340EX kits
This may also be used as a replacement transmitter for the MZ360271EX or MZ360272EX kit.

(See Replacement Transmitters below.)

**Replacement Transmitters:**

When ordering  a replacement for the MZ360271EX or MZ360272EX original transmitter, a newer one, MZ360361EX will be provided. The features on the new transmitter will be limited to the same functions as the older one that was provided in the kit.

To program the replacement transmitter for MZ260271EX, see MZ360360EX Programming.

To program the replacement transmitter for MZ360272EX, see MZ360340EX Programming.

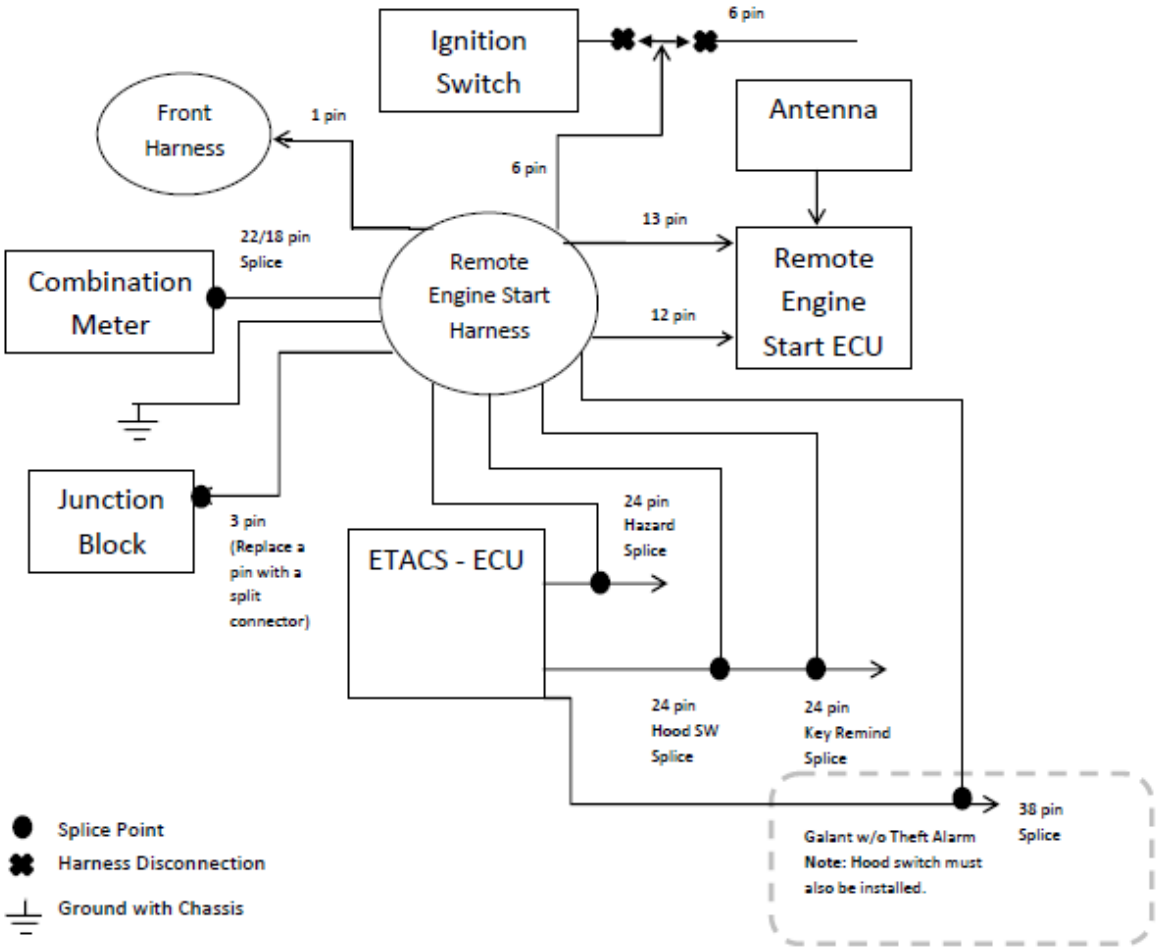
The procedure for setting the engine idling time must follow the procedure for MZ360272EX.

For safety reasons, only one transmitter can be programmed to the system at a time.

## Wire Routing

NOTE: Detailed installation instructions are on the Mitsubishi Dealer Link. (See Additional Resources at the end of this TSB).

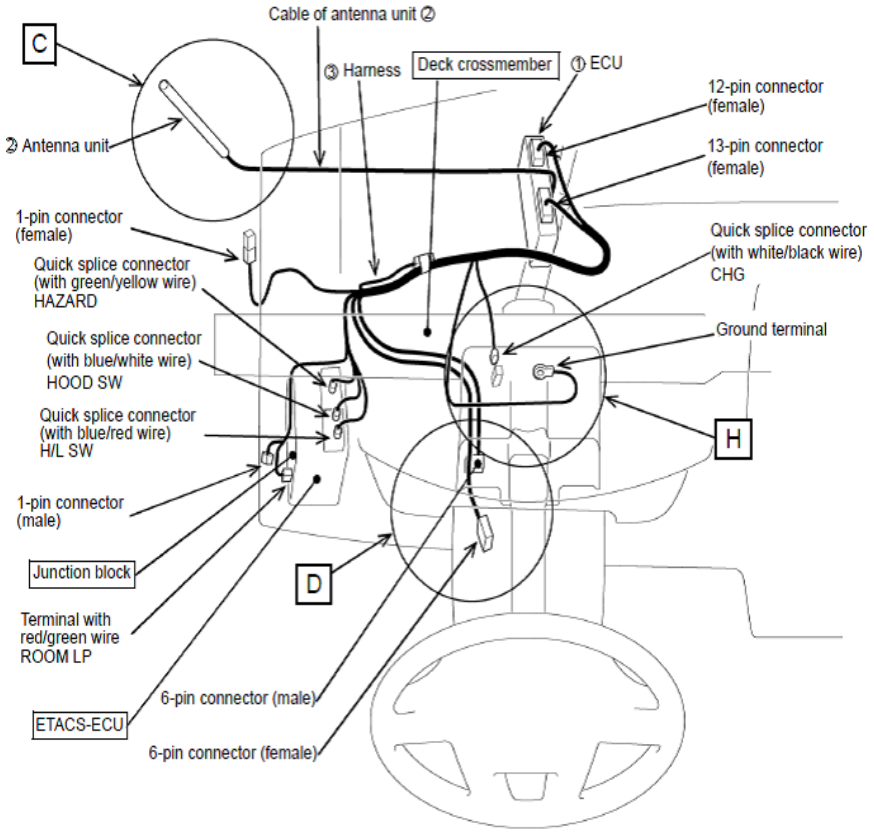
**Eclipse, Eclipse Spyder, Galant, Endeavor**
**Remote Engine Start Kit Part No. MZ360271EX/MZ360360EX**



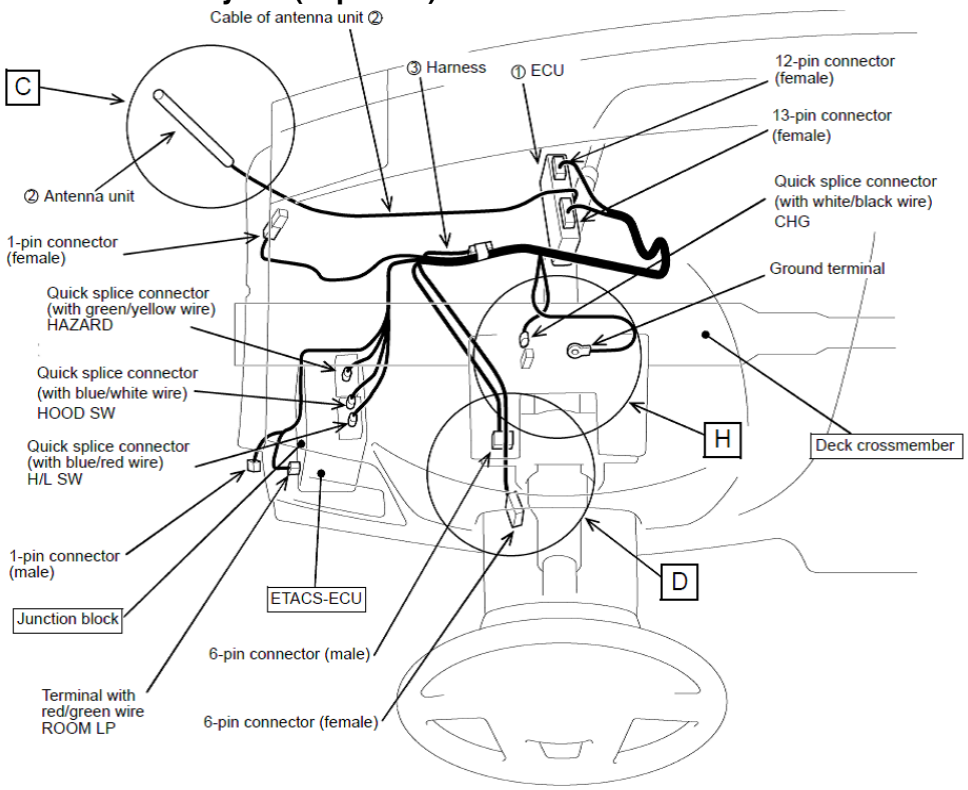
**WIRING DIAGRAM A**

**Remote Start p/n: MZ360271EX & MZ360360EX**

## Galant Harness Layout (Top View)



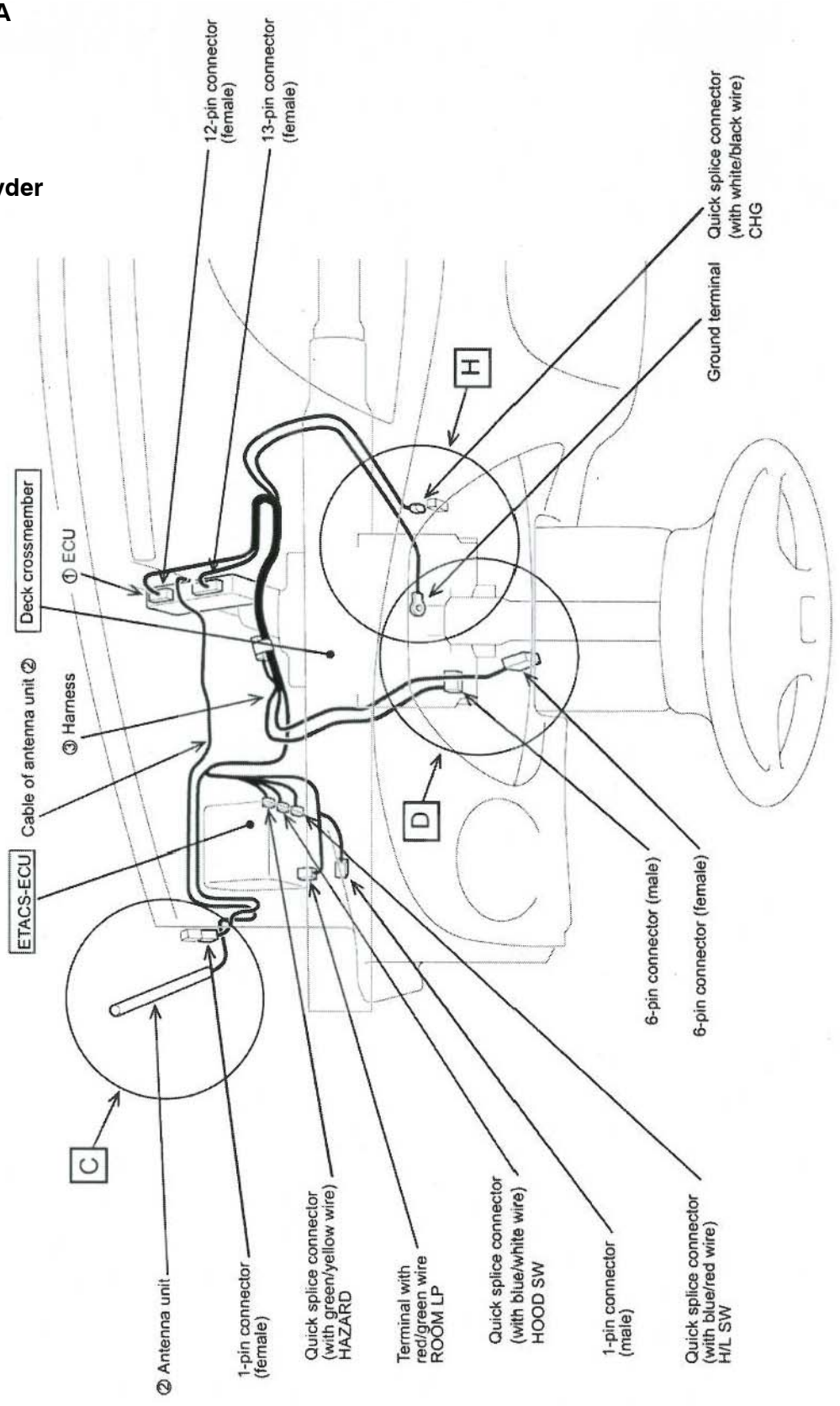

## Endeavor Harness Layout (Top View)



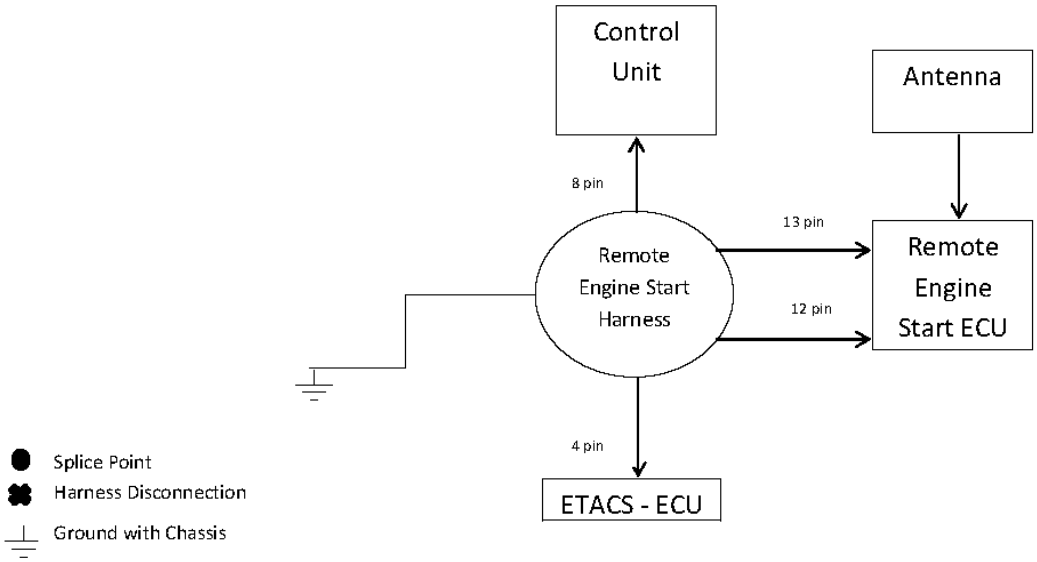
**WIRING DIAGRAM A (continued)**

**Remote Start p/n: MZ360271EX & MZ360360EX**

**Eclipse/Eclipse Spyder Harness Layout (Top View)**



## Lancer, Lancer Sportback, Lancer Evolution, Outlander, Outlander Sport
## Remote Engine Start Kit Part No. MZ360340EX/MZ360272EX

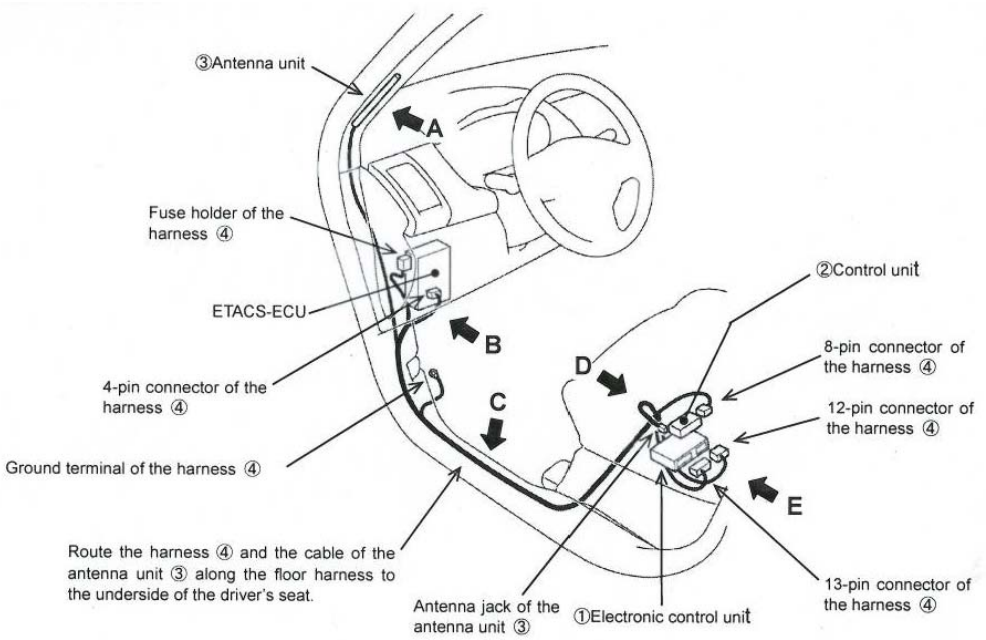



**Note:** Detailed installation instructions can be found on the MITSUBISHI DEALER LINK. (See Additional Resources at the end of this TSB for details on accessing these instructions).
**Note:** A hood switch (MZ360316EX) will have to be installed on Lancer/Lancer Sportback produced before 1/31/2010 and 2010-2011 Lancer DE. Hood switch installation instructions are on the MITSUBISHI DEALER LINK.

**DIAGRAM B**

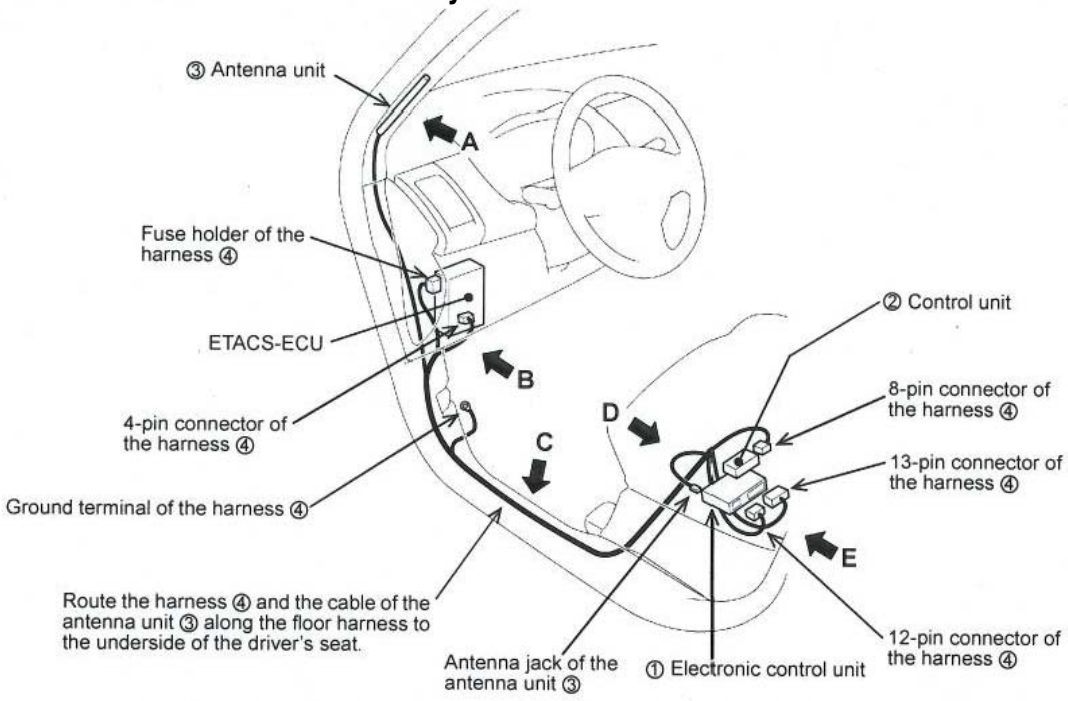
**Remote Start p/n: MZ360340EX**

### Outlander/Lancer Harness Layout

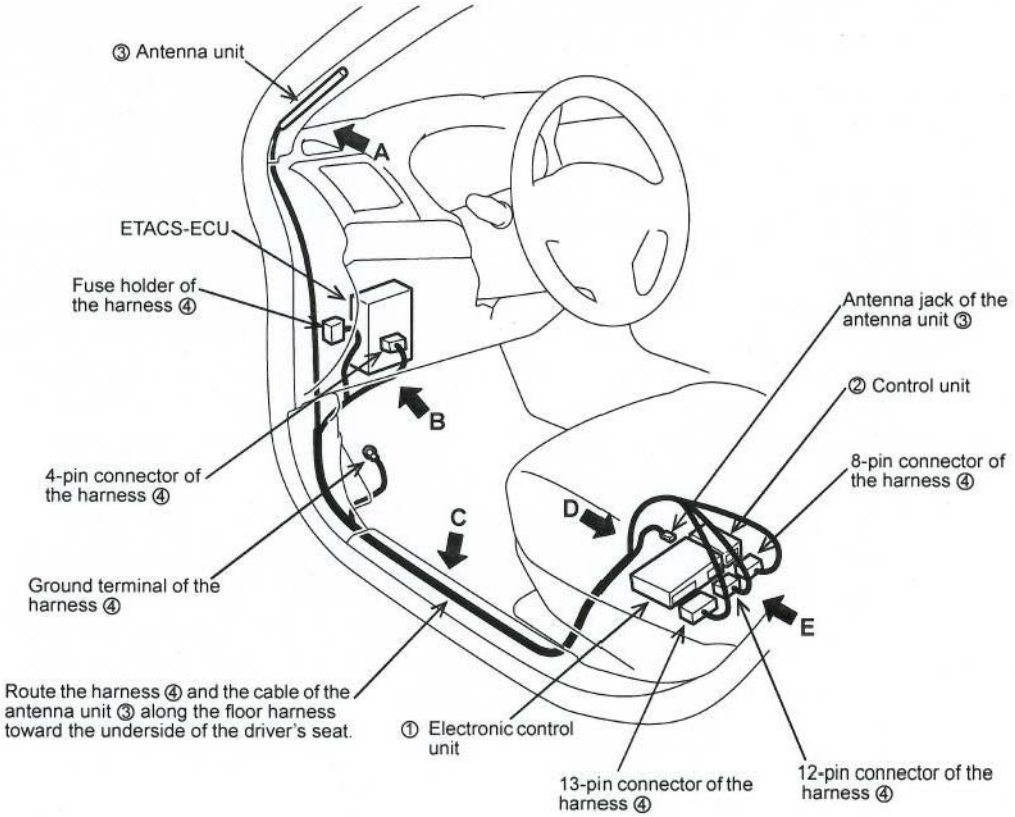


**Part No. MZ360272EX**

## Outlander Harness Layout




## Lancer Harness Layout



## Remote Engine Start Transmitter Operation

Before operating the transmitter, verify that:

The shifter is in the “P” (Parking) position.
All doors (including the rear gate and spare tire carrier) are securely closed.
The engine hood is securely closed
The vehicle key is removed from the ignition switch. For vehicles equipped with the F.A.S.T. Key, the ignition switch is on the LOCK position.

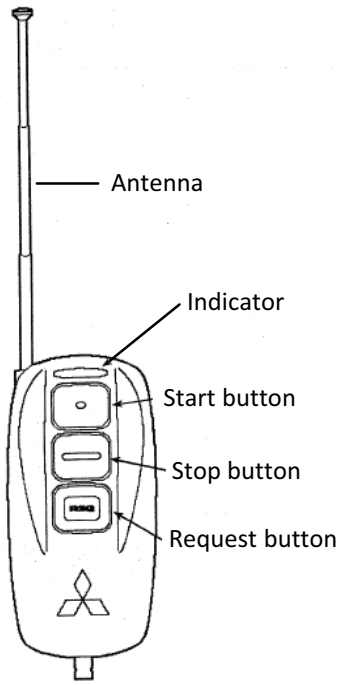
The transmitter will not start the engine unless all of the above conditions are properly set.

| Starting Engine | Stopping Engine |
|---|---|
| 1. Push the request/function button. The indicator will blink for approximately 2 seconds.<br>2. Push the start button while the indicator is blinking. The engine starting signal will be transmitted when the indicator stays on for 3 seconds. When the engine starts, the hazard warning light on the vehicle will flash once. | 1. Push the request/function button. The indicator will blink for approximately 2 seconds.<br>2. Push the stop button while the indicator is blinking. The engine stop signal will be transmitted when the indicator stays on for 3 seconds. |

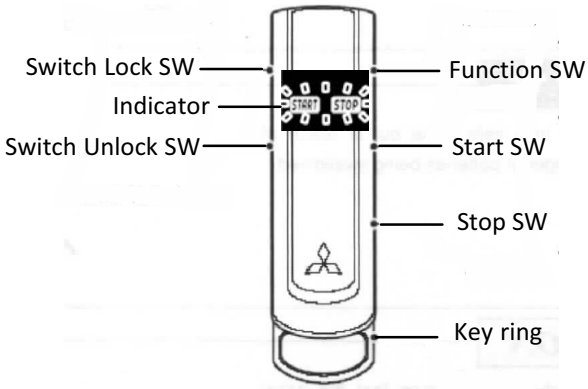
NOTE: Extend the antenna if necessary. The transmitter signal will reach further when the antenna is extended.

The remote engine starter will stop running after 10 minutes (factory default setting). The time setting can be changed. Refer to “Setting Engine Idle Time” below.

**Part No. MZ360300EX**




**Part No. MZ360361EX**




**Additional information on these transmitters is on the Mitsubishi Dealer Link. (See Additional Resources at the end of this TSB).**

### Switch Lock

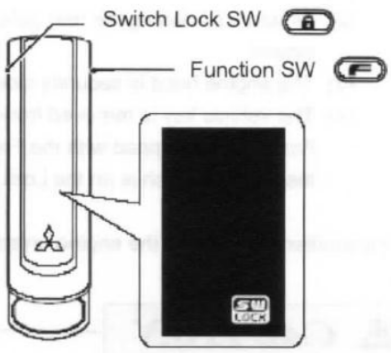
The remote for the MZ360360EX and MZ360340EX accessory parts have a switch lock function. Details are described below:

## Switch Lock setting and release

This function effects for the prevention of unexpected transmission in trouser pocket, handbag, and so on. The switches of the transmitter are locked and released if the below operation is done.

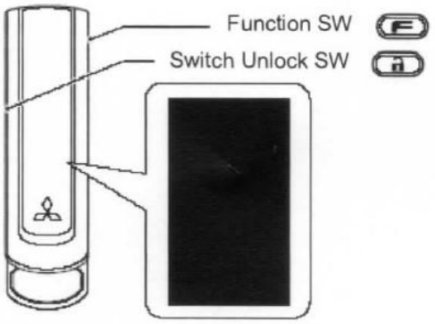
**1** Push Function SW and Switch Lock SW at the same time until buzzer sounds.

Switch Lock Mark stays on for about 2 seconds, and Switch Lock is set.




**2** Push Function SW and Switch Unlock SW at the same time until buzzer sounds.

Switch Lock Mark turnes off, and the Switch Lock is released.



## Setting Engine Idling Time

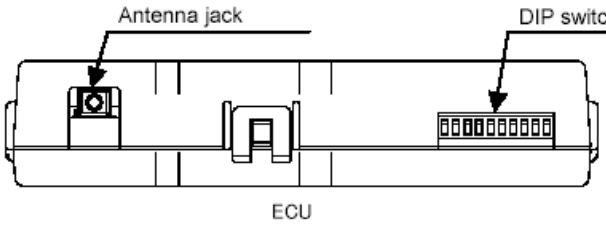
**Once a vehicle is started by the remote engine start system, the engine, if left undisturbed, will continue to idle for a set time. This is referred to as "Engine Idling Time." The factory default setting is 10 minutes. It can be adjusted as shown below.**

Part Number MZ360271EX/ MZ360272EX

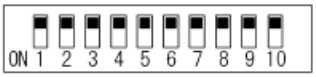
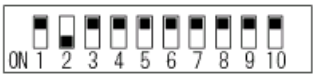
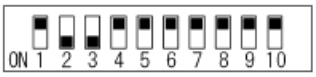
**Setting Idling Time**

The idling time can be set to 5, 10, 20 or 30 minutes.
The initial setting at shipment is 10 minutes.

**How to set the idling time**
With the engine stopped, set the No. 2 and No. 3 pins of the DIP switch on the ECU to the positions shown in the following table.




Condition of DIP switch
· Set the lever down. :ON
· Set the lever up. :OFF

| DIP switch | | | Idling time |
|---|---|---|---|
| No. 2 pin | No. 3 pin | Drawing | |
| OFF | OFF |  | 10 min. (initial setting) |
| ON | OFF |  | 20 min. |
| OFF | ON | | 30 min. |
| ON | ON |  | 5 min. |



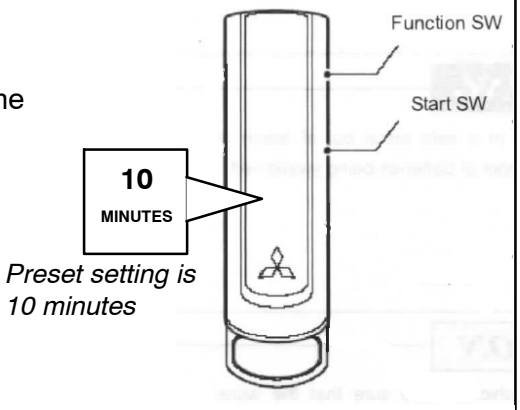
**⚠ CAUTION**
Always set the DIP switch pins other than the No. 2 and 3 pins to the OFF position.

Part Number MZ360360EX/ MZ360340EX

## Setting Idling Time

**1** Press **Function** switch and **Start** switch at the same time until the buzzer sounds.

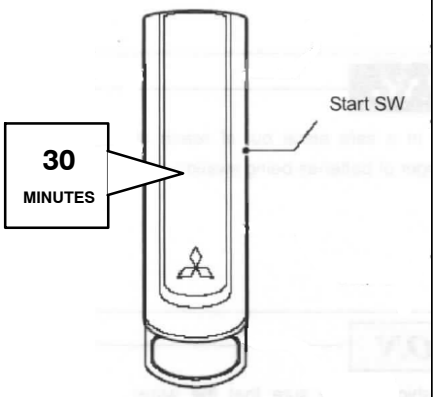
10 minutes Mark or 30 minutes Mark will blink according to the default setting.




*Preset setting is 10 minutes*

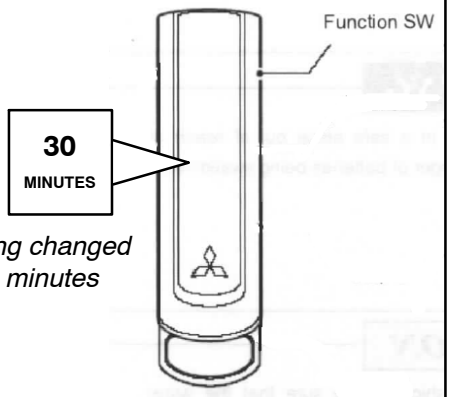
**2** Press **Start** switch to set the idling time.

The selected idle time Mark blinks.
(Example shows 30 minutes idle time)



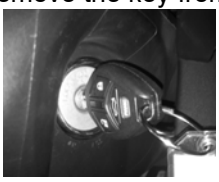
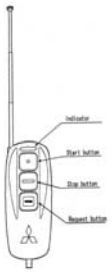
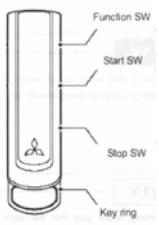

If the Mark stops blinking and turns off, retry from Step 1.

**3** Press **Function** switch until buzzer sounds.
The idling time Mark stays on for about 2 seconds.

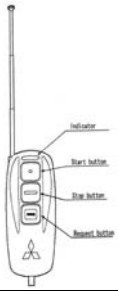
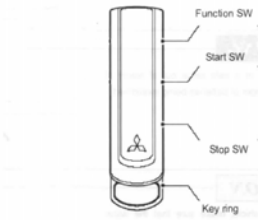
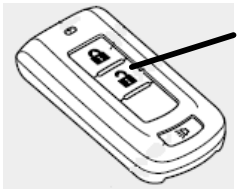



*Setting changed to 30 minutes*

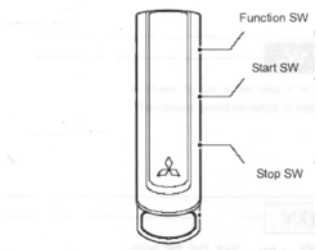
## Programming the RKE System

<table>
<tr><th>No.</th><th>MZ360271EX</th><th>MZ360272EX</th><th>MZ360340EX</th><th>MZ360360EX</th><th>Response</th></tr>
<tr><td>1</td><td>Close all doors and hatch, but open hood. Turn off ignition and remove key.</td><td>Close all doors, hood and hatch. Turn off ignition and remove key.</td><td>Close all doors, hood and hatch. Turn off ignition and remove key.</td><td>Close all doors and hatch, but open hood. Turn off ignition and remove key.</td><td>N/A</td></tr>
<tr><td>2</td><td colspan="4">Insert ignition key. Turn the key to ACC position. Turn key back to Lock (OFF) 5 times within 10 seconds. Then remove the key from the ignition.<br>  <br>For MZ360340EX: Insert ignition key. Turn key from Lock (OFF) to ACC. Wait 3 to 5 seconds. Return key to Lock (OFF). Repeat 4 times within 10 seconds.</td><td>ECU beeps once.</td></tr>
<tr><td rowspan="2">3</td><td colspan="2" rowspan="2">Within 10 seconds after the beep sounds, press the 3 buttons on the transmitter all at once and hold for 2 seconds or longer. HINT: It can be done in the following order: press and hold Start, add Stop, add Request.<br>  </td><td rowspan="2">  <br><br>Within 5 seconds after the beep sounds, press the 3 buttons on the transmitter all at once and hold for 1 second or more. HINT: It can be done in the following order: press and hold Start, then add Stop, then add Function.</td><td>Buzzer on transmitter sounds once and its indicator light will start blinking.</td></tr>
<tr><td>Buzzer on transmitter sounds once and its “Start” and “Stop” lights will begin blinking.</td></tr>
<tr><td>4</td><td colspan="2">While indicator lights are blinking, insert the ignition key and turn to ACC, then back to Lock (OFF). Then remove the key.</td><td>While the “Start” and “Stop” lights are blinking, insert the ignition key and turn to ACC, then back to Lock (OFF). Then remove the key.</td><td>ECU beeps once.</td></tr>
<tr><td>5</td><td colspan="2">Perform the engine stop operation by the remote controller. HINT: Press the “Request” button, then press the “Stop” button and hold both for 1 second or longer.</td><td>Perform the engine stop operation by the remote controller. Hint: Press the “Stop” button and hold for 1 second or more.</td><td>ECU beeps twice.</td></tr>
<tr><td>6</td><td>N/A</td><td>Within 10 seconds after the ECU beep, press the unlock button on the vehicle remote 3 times.<br> <br></td><td>N/A</td><td>Door locks automatically lock and unlock. Then several seconds later they lock and unlock again.</td></tr>
<tr><td>7</td><td colspan="4">Remote Engine Start registration is completed.</td></tr>
</table>

## Programming the KOS System

<table>
<tr><th>No.</th><th>MZ360272EX</th><th>MZ360340EX</th><th>Response</th></tr>
<tr><td>1</td><td colspan="2">Close all doors, hood and hatch. Get into the vehicle and make sure the ignition is OFF. Remove the knob cap. Insert emergency key.<br> </td><td>N/A</td></tr>
<tr><td>2</td><td>Turn emergency key to ACC position, then back to Lock (OFF) 5 times within 10 seconds. Then remove the key.</td><td>Turn emergency key from Lock (OFF) to ACC. Wait 3 to 5 seconds. Return key to Lock (OFF). Repeat 4 times within 10 seconds.</td><td>ECU beeps once.</td></tr>
<tr><td rowspan="2">3</td><td rowspan="2">Within 10 seconds after the beep sounds, press the 3 buttons on the transmitter all at once and hold for 2 seconds or longer. HINT: It can be done in the following order: press and hold Start, add Stop, add Request.<br>  </td><td rowspan="2">  <br>Within 5 seconds of finishing Step 2, press the 3 buttons on the transmitter all at once and hold for 1 second or more. HINT: It can be done in the following order: press and hold Start, then add Stop, then add Function.</td><td>Buzzer on transmitter sounds once and its indicator light will start blinking.</td></tr>
<tr><td>Buzzer on transmitter sounds once and its “Start” and “Stop” lights will begin blinking.</td></tr>
<tr><td>4</td><td>While indicator lights are blinking, insert the ignition key and turn to ACC, then back to Lock (OFF). Then remove the key.</td><td>While the “Start” and “Stop” lights are blinking, insert the ignition key and turn to ACC, then back to Lock (OFF). Remove the key.</td><td>ECU beeps once.</td></tr>
<tr><td>5</td><td>Perform the engine stop operation by the remote controller. HINT: Press the “Request” button, then press the “Stop” button, and hold both for 1 second or longer.</td><td>Perform the engine stop operation by the remote controller. HINT: Press the “Stop” button and hold for 1 second or longer.</td><td>ECU beeps twice.</td></tr>
<tr><td>6</td><td colspan="2">Within 10 seconds after the ECU beep, press the unlock button on the vehicle remote 3 times.<br>  </td><td>Door locks automatically lock and unlock. Then several seconds later they lock and unlock again.</td></tr>
<tr><td>7</td><td colspan="3">Remote Engine Start registration is complete.</td></tr>
</table>

## Programming the Keyless Push Start System – Part No. MZ360340EX

| No. | Action | Response |
|---|---|---|
| 1 | Close all doors, hood, and hatch. Get into the vehicle and make sure the ignition is OFF. | N/A |
| 2 | Press the Engine Start button once, then wait for 3 to 5 seconds. | The indicator light on the transmitter switch changes to orange. |
| 3 | Press the Engine Start button twice. | The indicator light on the transmitter switch turns off. |
| 4 | Within 10 seconds of the last step, press the Engine Start button 12 times. | ECU beeps once. |
| 5 | Within 5 seconds of finishing Step 4, press the 3 buttons on the transmitter all at once and hold for 1 second or longer. *HINT: It can be done in the following order: press and hold Start, add Stop, add Function.*   | Buzzer on the transmitter sounds once, and the “Start” and “Stop” lights begin blinking. |
| 6 | While “Start” and “Stop” are blinking, press the Engine Start button 3 times. | ECU beeps once. |
| 7 | Press the “Stop” button on the transmitter for 1 second or more. | ECU beeps twice. |
| 8 | Within 10 seconds after the ECU beep, press the Unlock button on the vehicle remote 3 times. | Door locks automatically lock and unlock. Then several seconds later they lock and unlock again. |
| 9 | Remote Engine Start registration is complete. | |

## Common Remote Engine Start Issues

| CONCERN | SUGGESTIONS |
|---|---|
| Cannot program Remote Engine Start transmitter | Verify that the vehicle is not affected by the incorrect wiring instructions for 2009 & later Endeavors and 2010 & later Eclipse/Eclipse Spyder covered later in this bulletin.<br><br>See programming instructions (RKE, KOS, Push Button) and also Tech Line Video on Programming<br><br>Verify correct installation (MZ360360EX, MZ360340EX, MZ360272EX, MZ360271EX). Full operation and installation instructions can be found on the Mitsubishi Dealer Link.<br><br>Proper Radio Frequency operation of the remote can be verified using the Mitsubishi Radio Frequency Detector Part #: MIT47305.<br><br>Perform hardware troubleshooting diagnostics (MZ 360360EX, MZ360340EX, MZ360272EX, MZ360271EX). Full operation and installation instructions can be found on the Mitsubishi Dealer Link. |
| Engine will not start using Remote Engine Start system | User must first press the function button, then the start button, to start the engine with the remote.<br><br>If the vehicle has been parked for more than two weeks, turn the ignition switch to ACC and then back to OFF. Wait three seconds or more and the system will be reactivated.<br><br>Verify that the vehicle is not affected by the incorrect wiring instructions for 2009 & later Endeavors and 2010 & later Eclipse/Eclipse Spyder covered later in this bulletin.<br><br>Verify correct installation (MZ360360EX, MZ360340EX, MZ360272EX, MZ360271EX). Full operation and installation instructions can be found on the Mitsubishi Dealer Link.<br><br>Proper RF operation of the remote can be verified using the Mitsubishi RF Detector P/N MIT47305.<br><br>Perform hardware troubleshooting diagnostics. First verify the transmitter setup then proceed to the appropriate model (MZ360360EX, MZ360340EX, MZ360272EX, MZ360271EX). Full operation and installation instructions can be found on the Mitsubishi Dealer Link. |

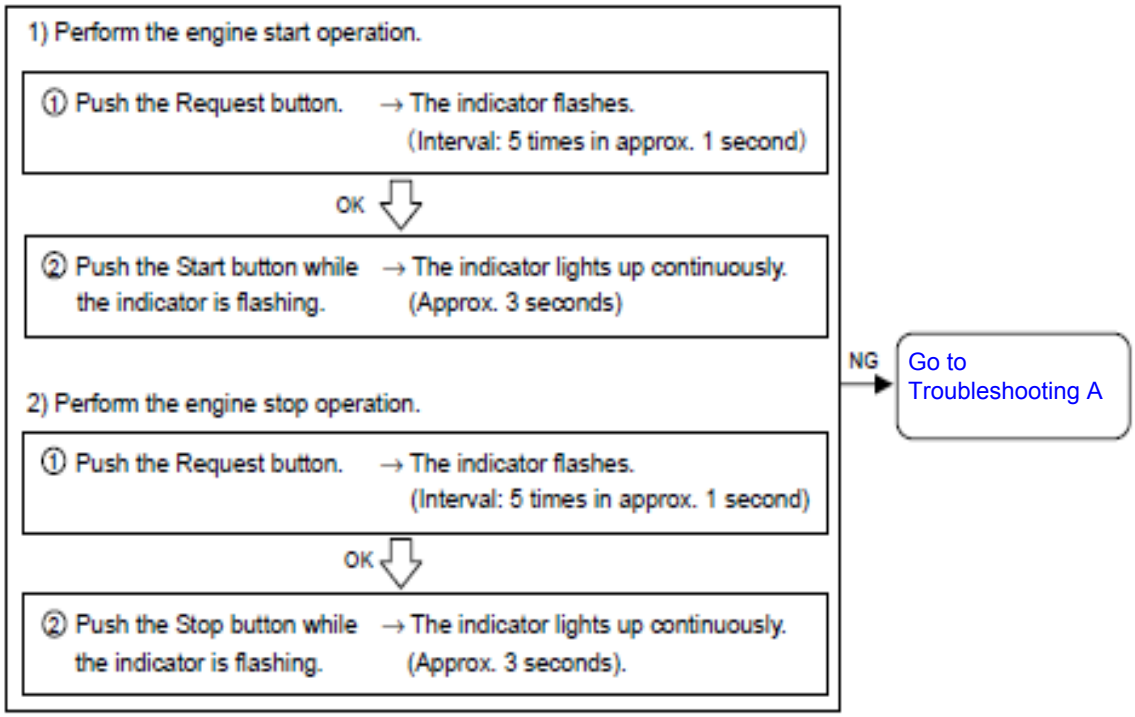
| | |
|---|---|
| How to change the engine idling time in the Remote Engine Start system? | See Setting Engine Idle Time MZ360360EX/MZ360340EX, MZ360272EX/MZ360271EX. |
| Can a second transmitter be programmed to the Remote Engine Start system? | No. For safety reasons, only one remote can be programed to a specific remote engine start system at one time.<br><br>However, a replacement transmitter can be programmed. See Replacement Transmitters. |
| Engine shuts off when the driver's door is opened. | This is normal operation of the system. Refer to the Remote Engine Start system owner's manual on the Mitsubishi Dealer Link. |
| Parking lights do not flash after the engine is started through the Remote Engine Start system. | Flashing parking lights feature is only available on some models. Refer to the Remote Engine Start system owner's manual on the Mitsubishi Dealer Link. |
| Indicator light on the transmitter does not flash or stay on. | Verify that the transmitter is not being operated within 2 seconds of engine start/stop.<br><br>Verify batteries are properly installed in the transmitter.<br><br>Replace discharged transmitter battery. |
| Indicator light on the transmitter flashes and stays on. | Verify the transmitter setup.<br><br>Fully extend the antenna on the transmitter or operate the transmitter at a closer range<br><br>If the vehicle has been parked for more than two weeks, turn the ignition switch to ACC and then back to OFF. Wait three seconds or more and the system will be reactivated.<br><br>If the buzzer of the remote start system sounds for about three seconds when the key is inserted into the ignition switch or the ignition switch is turned to “ON”, there may be a possible faulty ECU or remote control. |

## Troubleshooting Part No. MZ360271EX (page 1 of 11)

(Eclipse, Eclipse Spyder, Galant, Endeavor)

Perform troubleshooting E to L and confirm proper installation of the accessory.
Once confirmed, perform operation check.

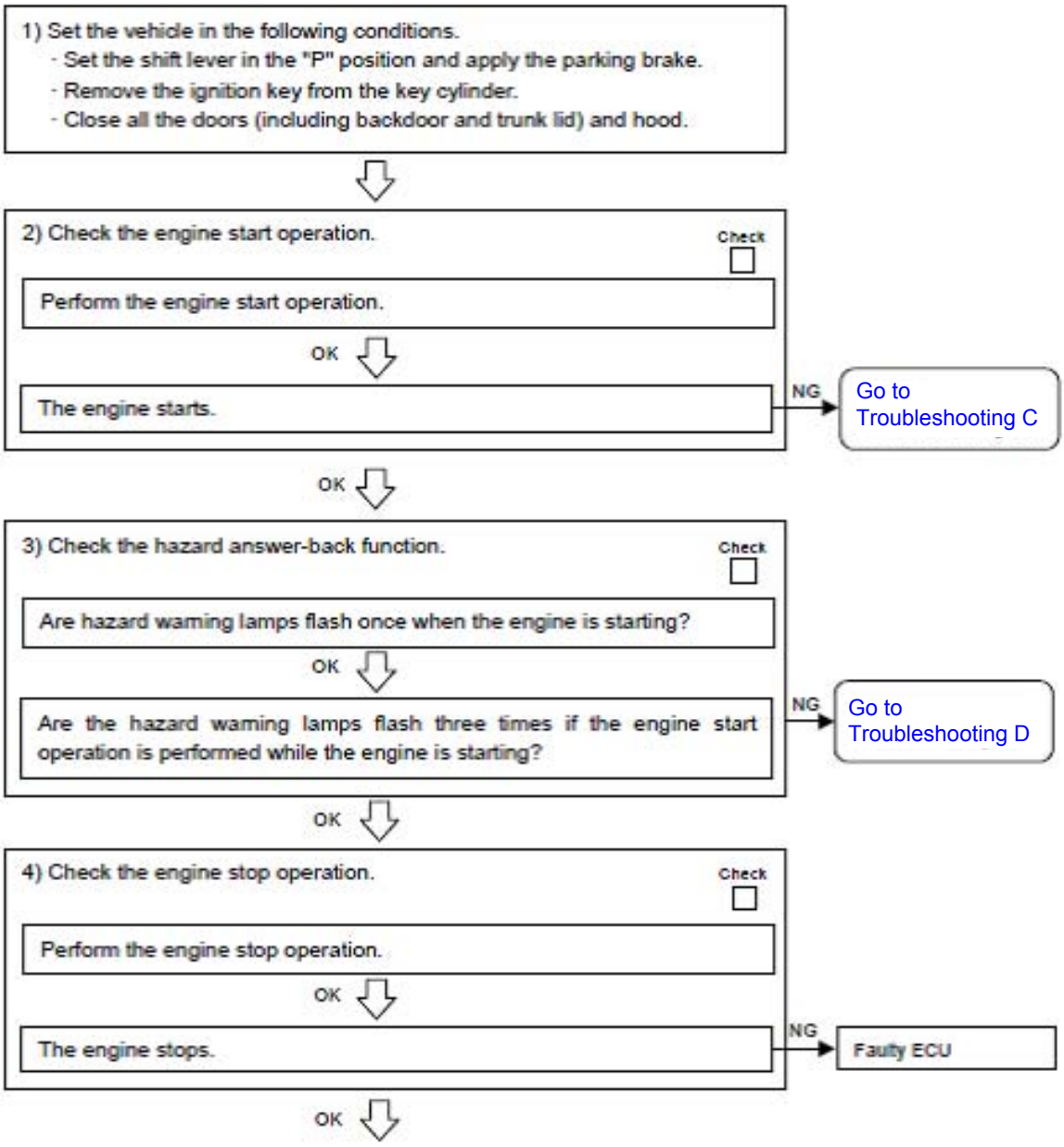
Operation check 1: Perform the following procedures:



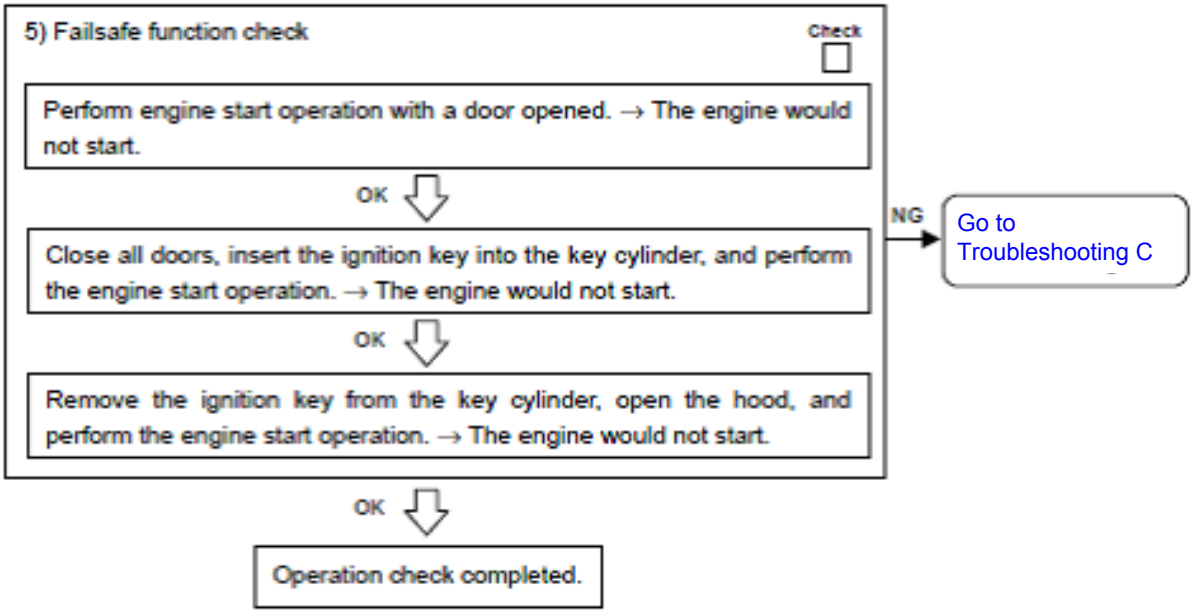
## Troubleshooting Part No. MZ360271EX (page 2 of 11)

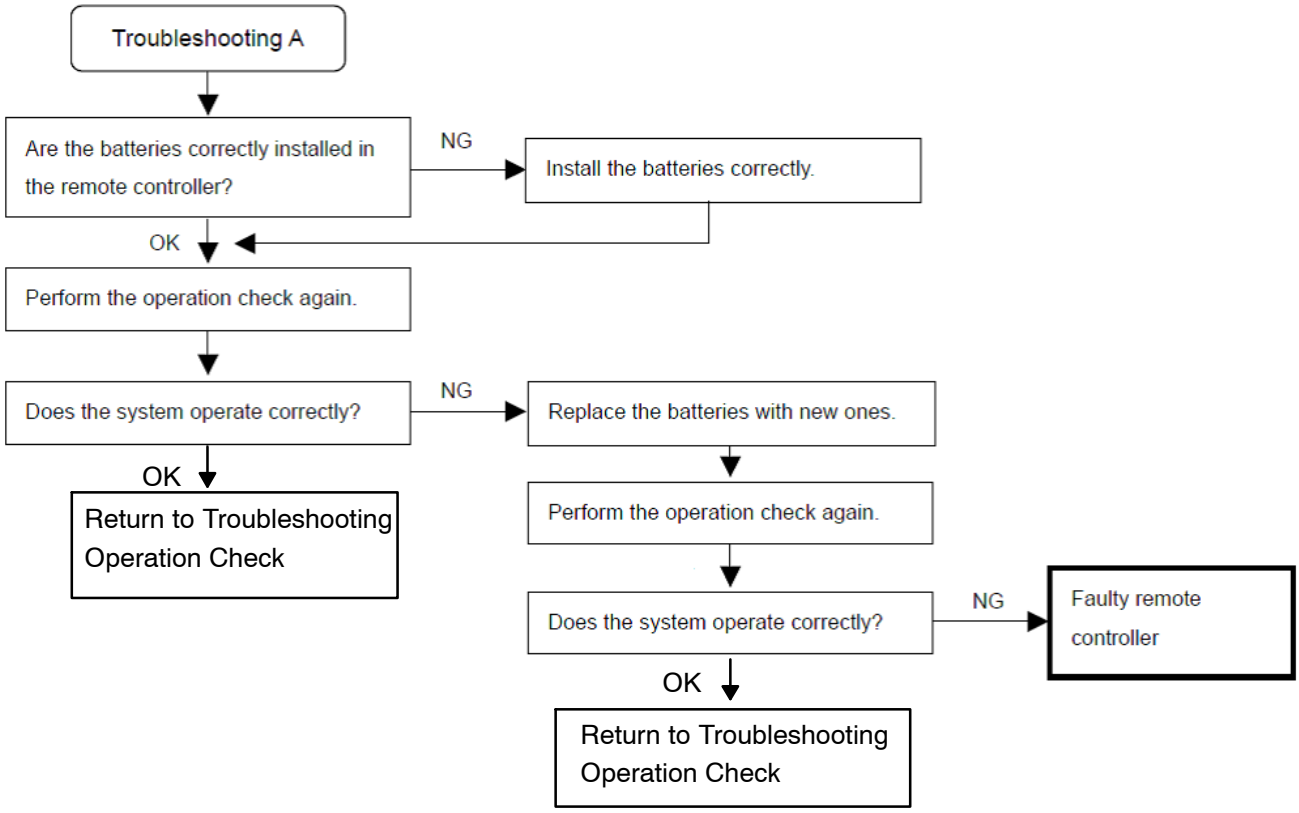
Operation check 2: Perform the following procedures:

Note: On Endeavor models, be sure to set the interior light switch to the “ROOM” position before proceeding.

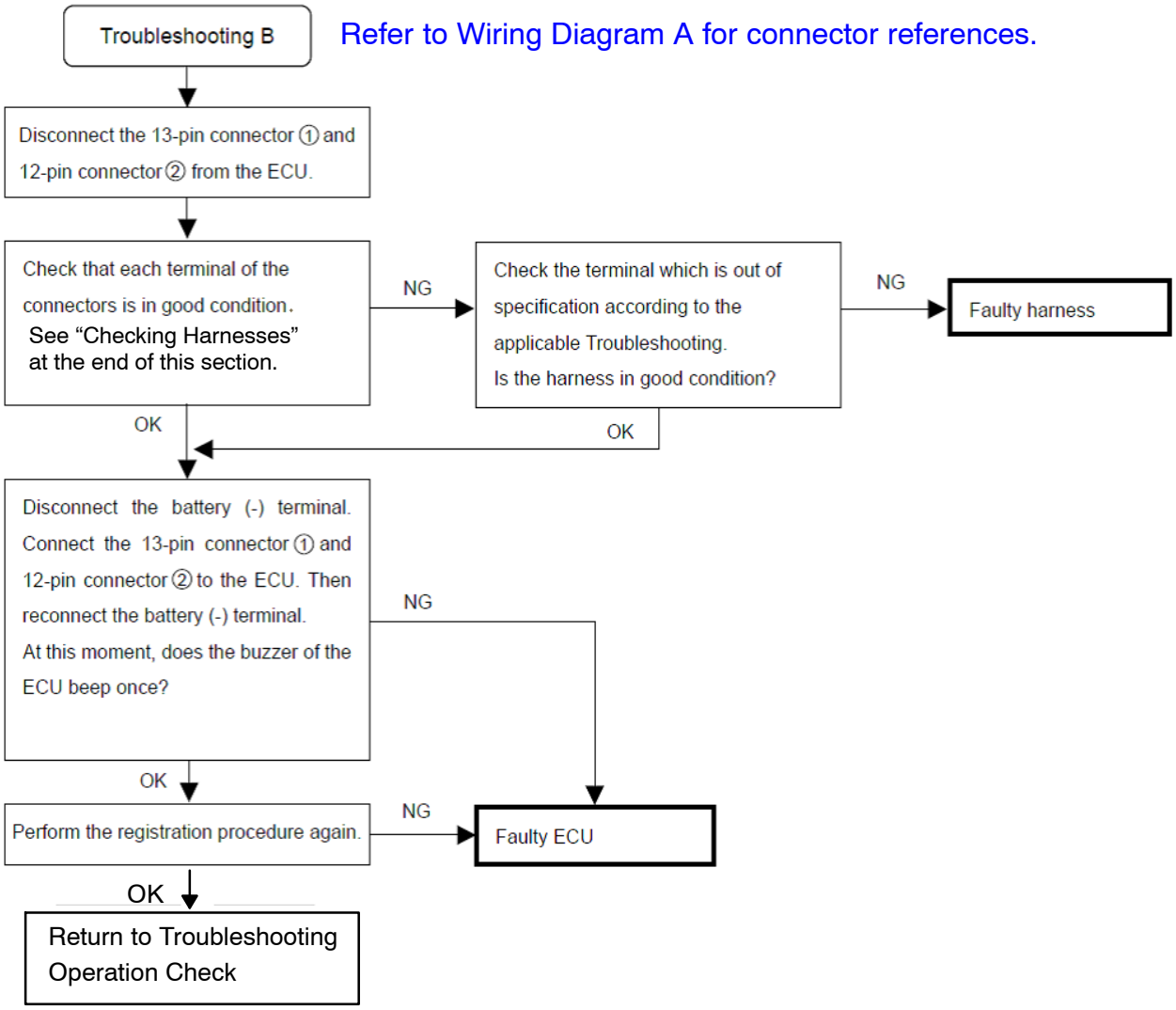


## Troubleshooting Part No. MZ360271EX (page 3 of 11)

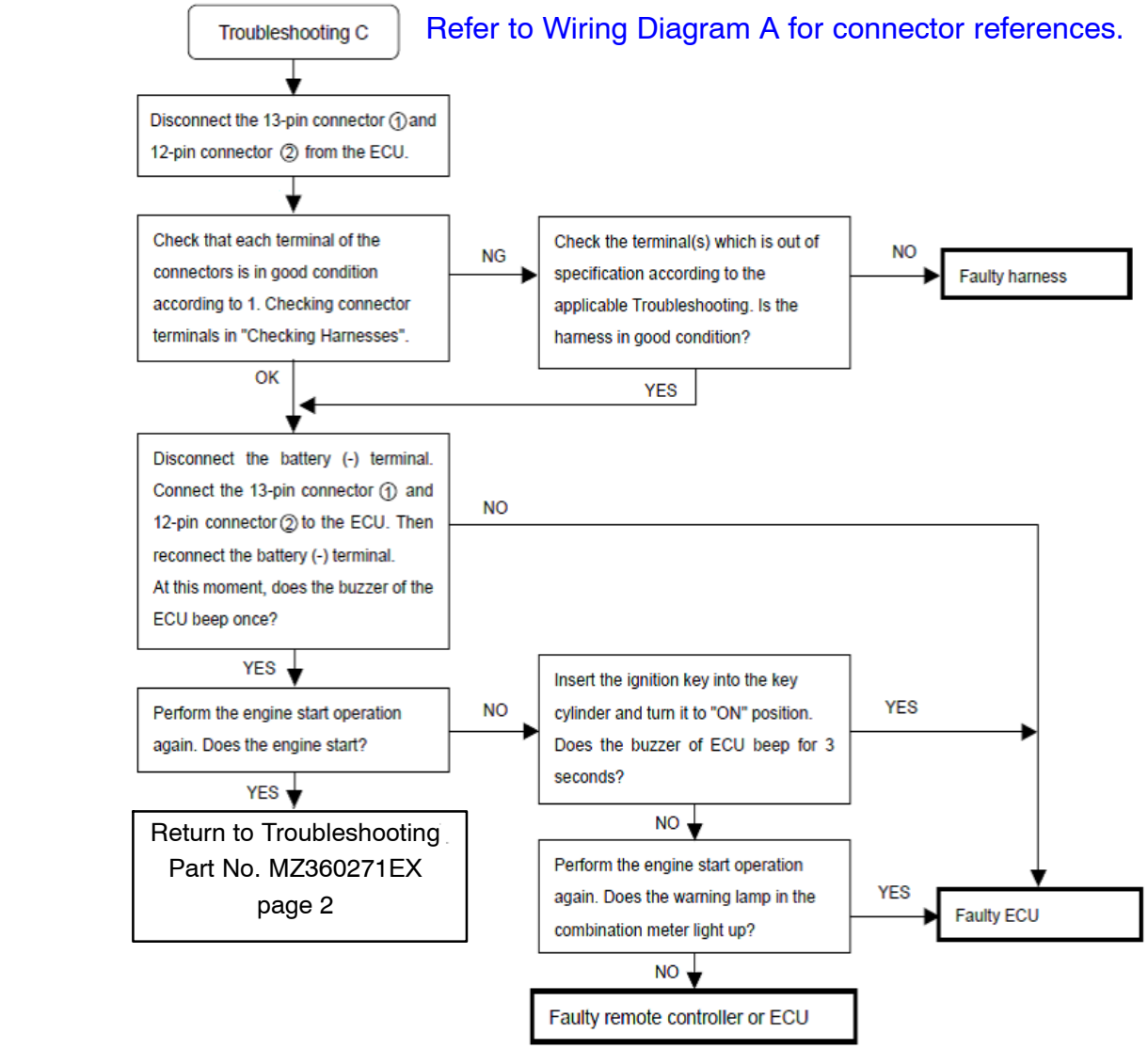


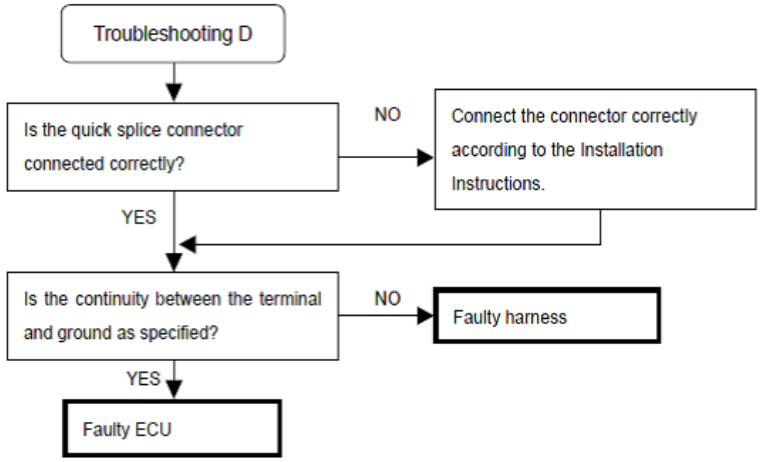



## Troubleshooting Part No. MZ360271EX (page 4 of 11)



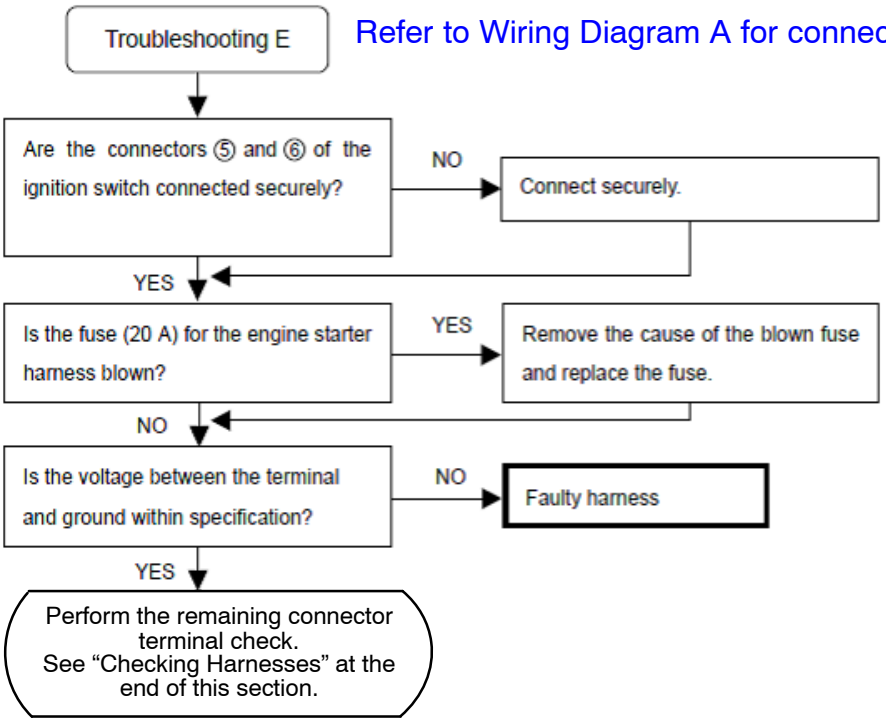
## Troubleshooting Part No. MZ360271EX (page 5 of 11)

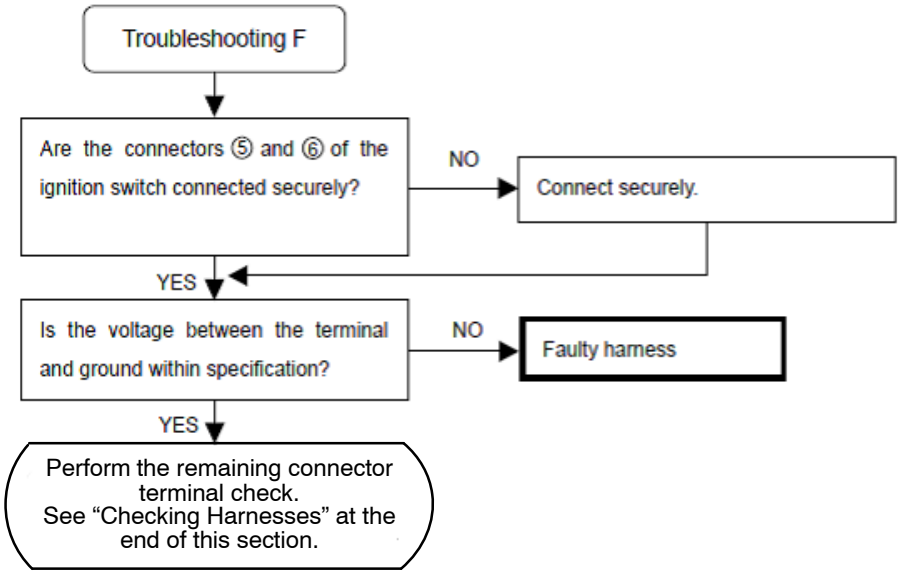


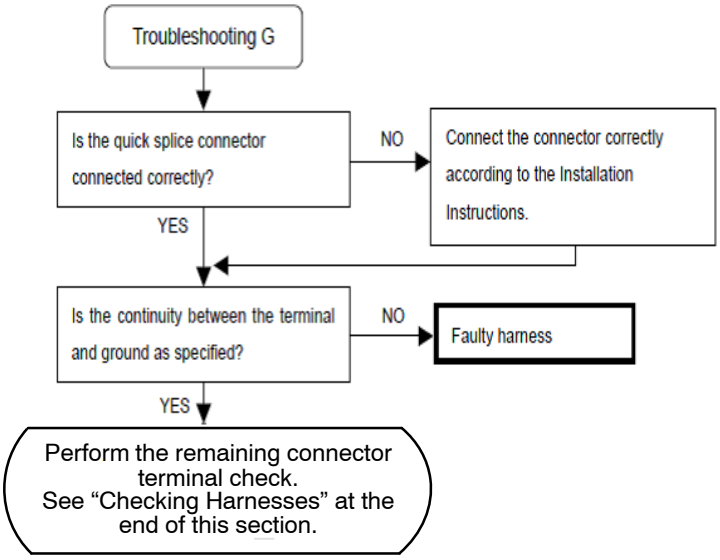
## Troubleshooting Part No. MZ360271EX (page 6 of 11)

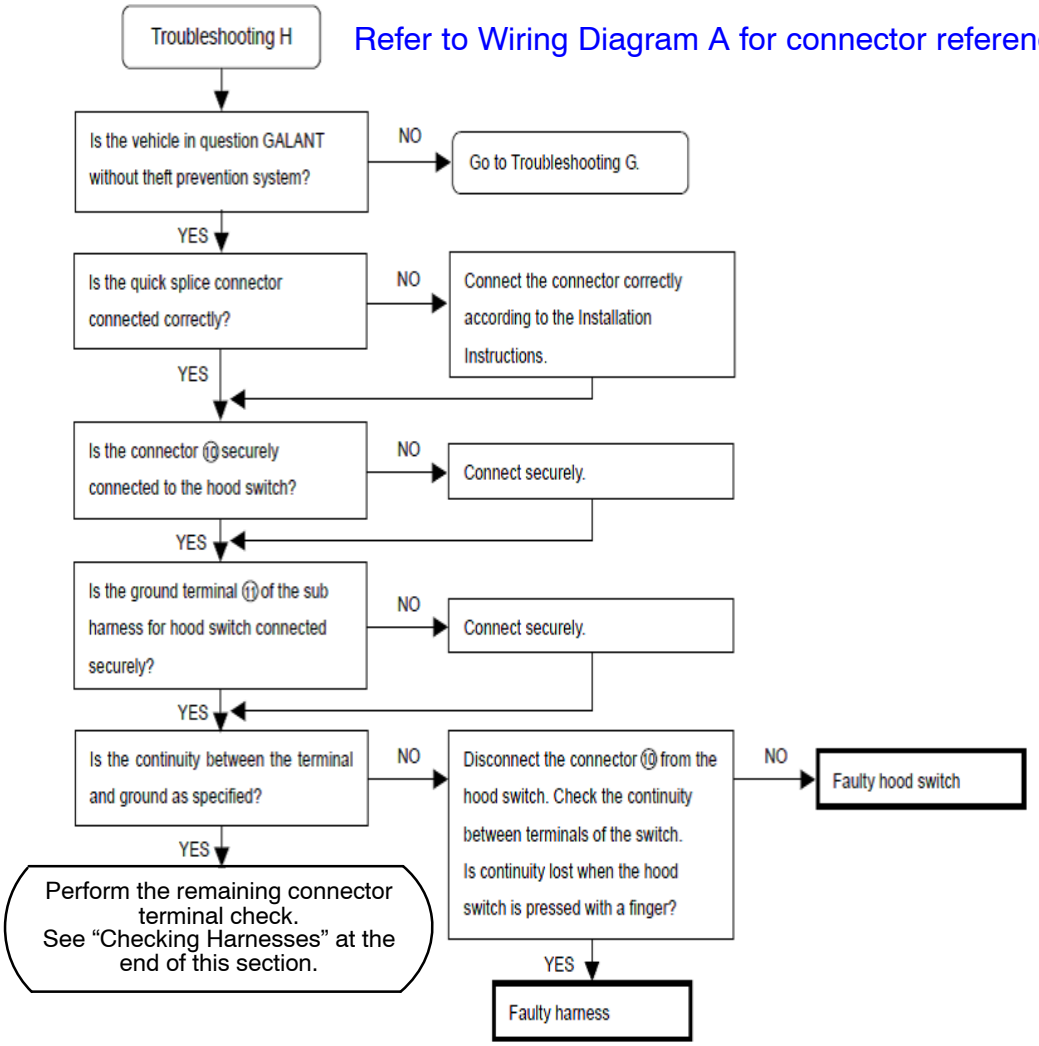
If the vehicle does not have a 20A fuse for the engine starter harness, go to Troubleshooting F.



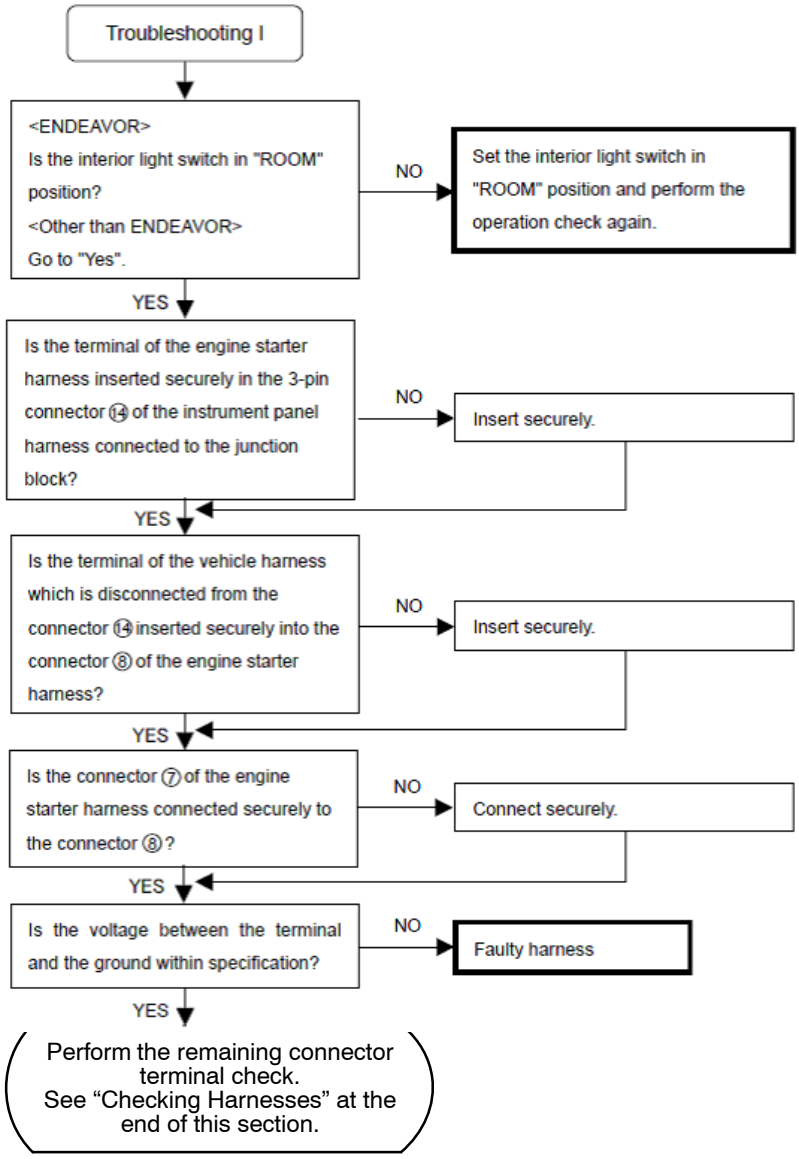
## Troubleshooting Part No. MZ360271EX (page 7 of 11)



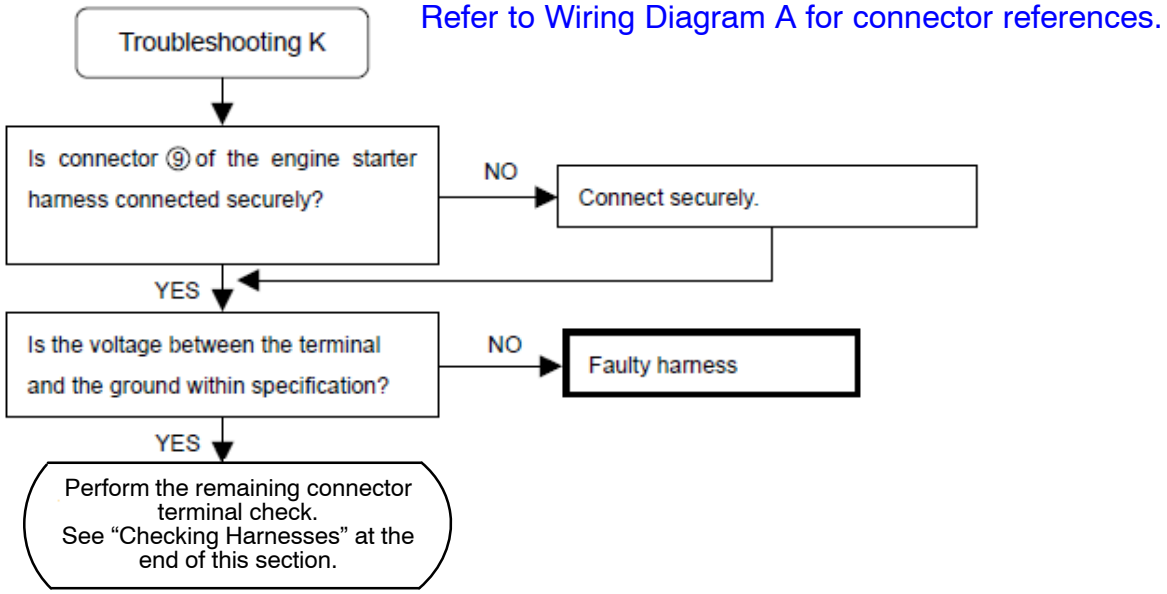



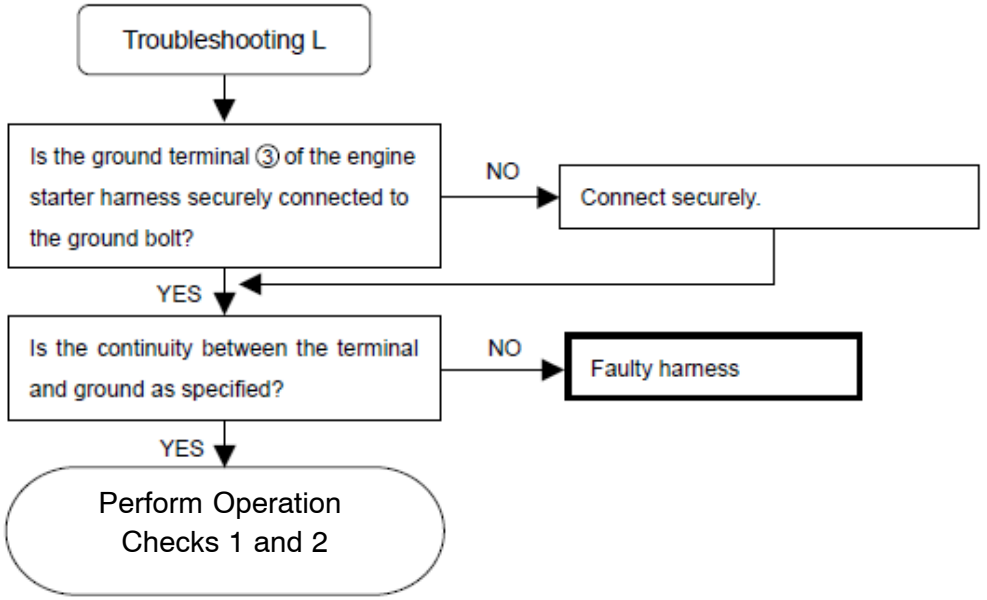
## Troubleshooting Part No. MZ360271EX (page 8 of 11)

Refer to Wiring Diagram A for connector references.



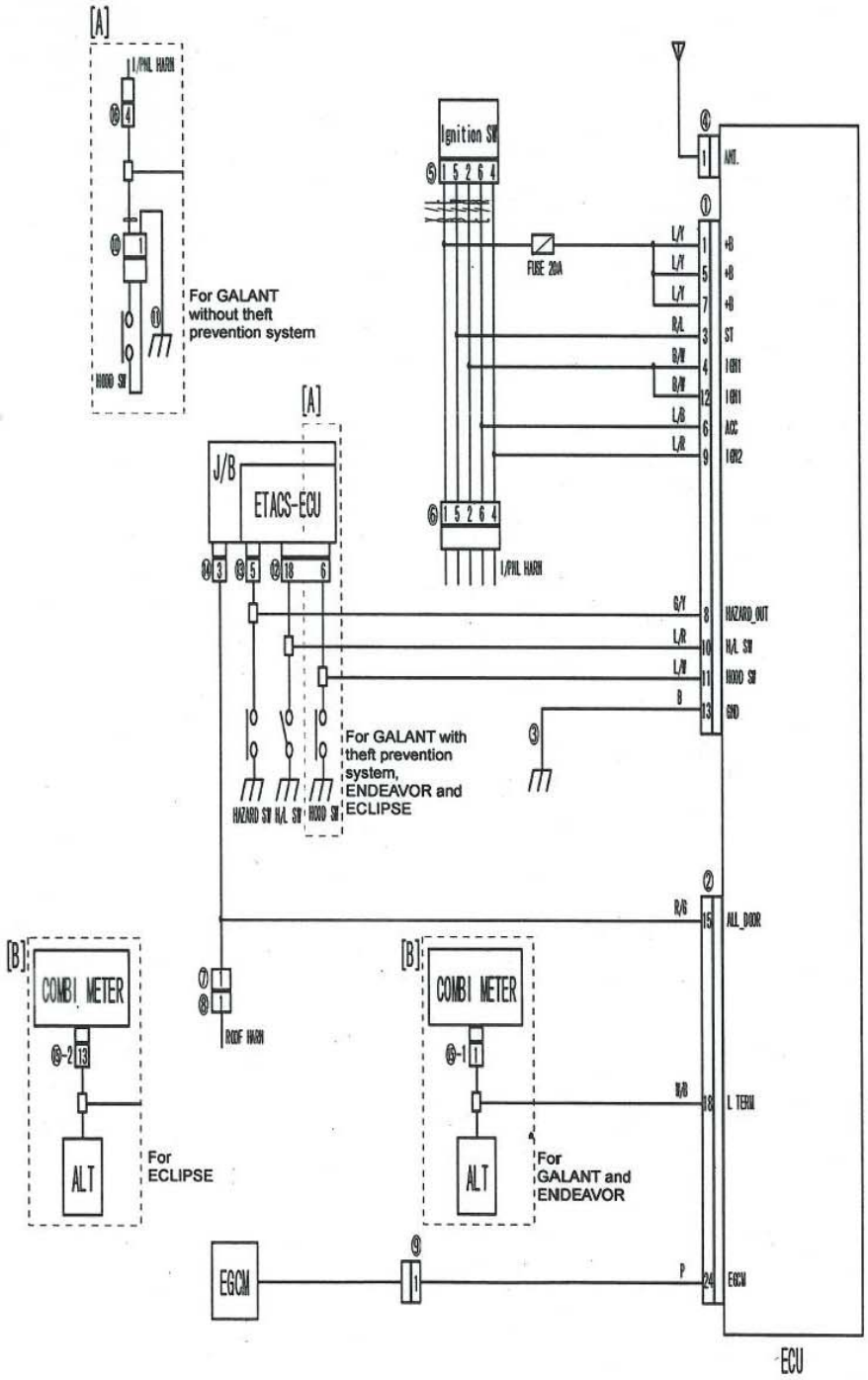
## Troubleshooting Part No. MZ360271EX (page 9 of 11)



## Troubleshooting Part No. MZ360271EX (page 10 of 11)

**Circuit Diagram**



# Troubleshooting Part No. MZ360271EX (page 11 of 11)

## Checking Harnesses

**Note**

The probes of the multimeter must be applied from the harness side of the connector.

1. Checking connector terminals

Check that the battery voltage is 10 V or higher. Then, while referring to the circuit diagram, check each connector of the connector ①(13-pin, natural) and the connector ②(12-pin, black) connected to the ECU in accordance with the following table using a multimeter.

If any terminal is out of specification, perform the applicable troubleshooting shown in the table.

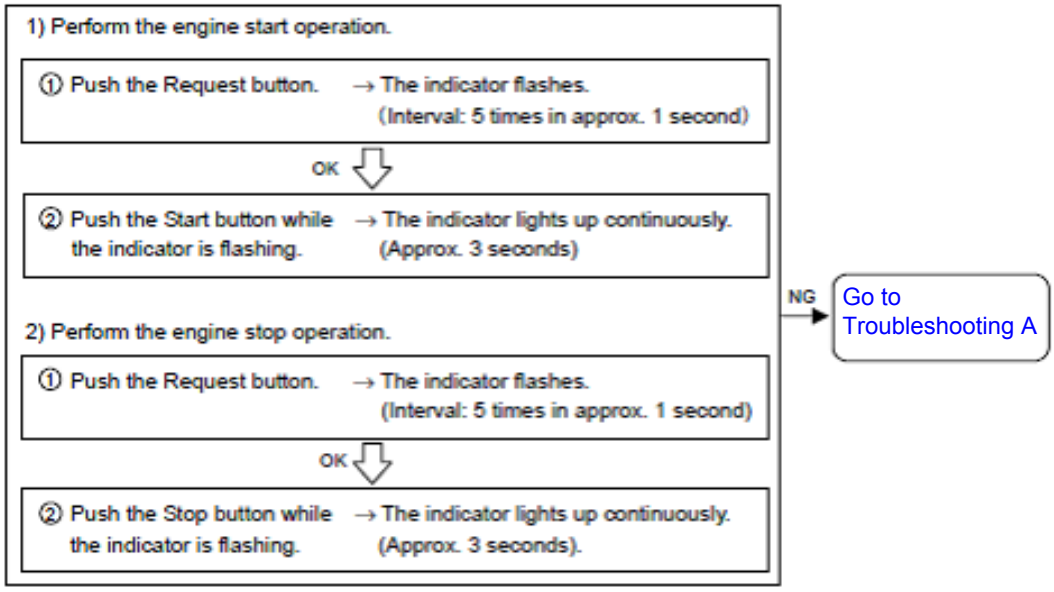
| Connector No. | Terminal No. | Item | Check condition | Specification | Check | Trouble-shooting |
|---|---|---|---|---|---|---|
| ① | 1, 5, 7 | Voltage between the terminal and the body ground | Any time | 10 to 14 V | | E |
| | 3 | Voltage between the terminal and the body ground | Ignition key position "ON" → "ST" | 0 V→10 to 14 V | | F |
| | 4, 12 | Voltage between the terminal and the body ground | Ignition key position "ACC" → "ON" | 0 V→10 to 14 V | | F |
| | 9 | Voltage between the terminal and the body ground | Ignition key position "ACC" → "ON" | 0 V→10 to 14 V | | F |
| | 6 | Voltage between the terminal and the body ground | Ignition key position "OFF" → "ACC" | 0 V→10 to 14 V | | F |
| | 8 | Continuity between the terminal and the body ground | Hazard warning lamp switch "OFF" → "ON" | No continuity → Continuity exists | | G |
| | 10 | Continuity between the terminal and the body ground | Insert the ignition key into the key cylinder. → Remove the key. | No continuity → Continuity exists | | G |
| | 11 | Continuity between the terminal and the body ground | Hood closed → Opened | No continuity → Continuity exists | | H |
| | 13 | Continuity between the terminal and the body ground | Any time | Continuity exists | | L |
| ② | 15 | Voltage between the terminal and the body ground | All door closed → A door opened (Perform on every door.) | 10 to 14 V→0 V | | I |
| | 18 | Voltage between the terminal and the body ground | Ignition key in "ON" position → Start the engine using ignition key. | 0 V→10 to 14 V | | J |
| | 24 | Voltage between the terminal and the body ground | Ignition key position "ACC" → "ON" | 0 V→10 to 14 V | | K |

## Troubleshooting Part No. MZ360272EX (page 1 of 6)

(Lancer, Lancer Sportback, Outlander, Outlander Sport)

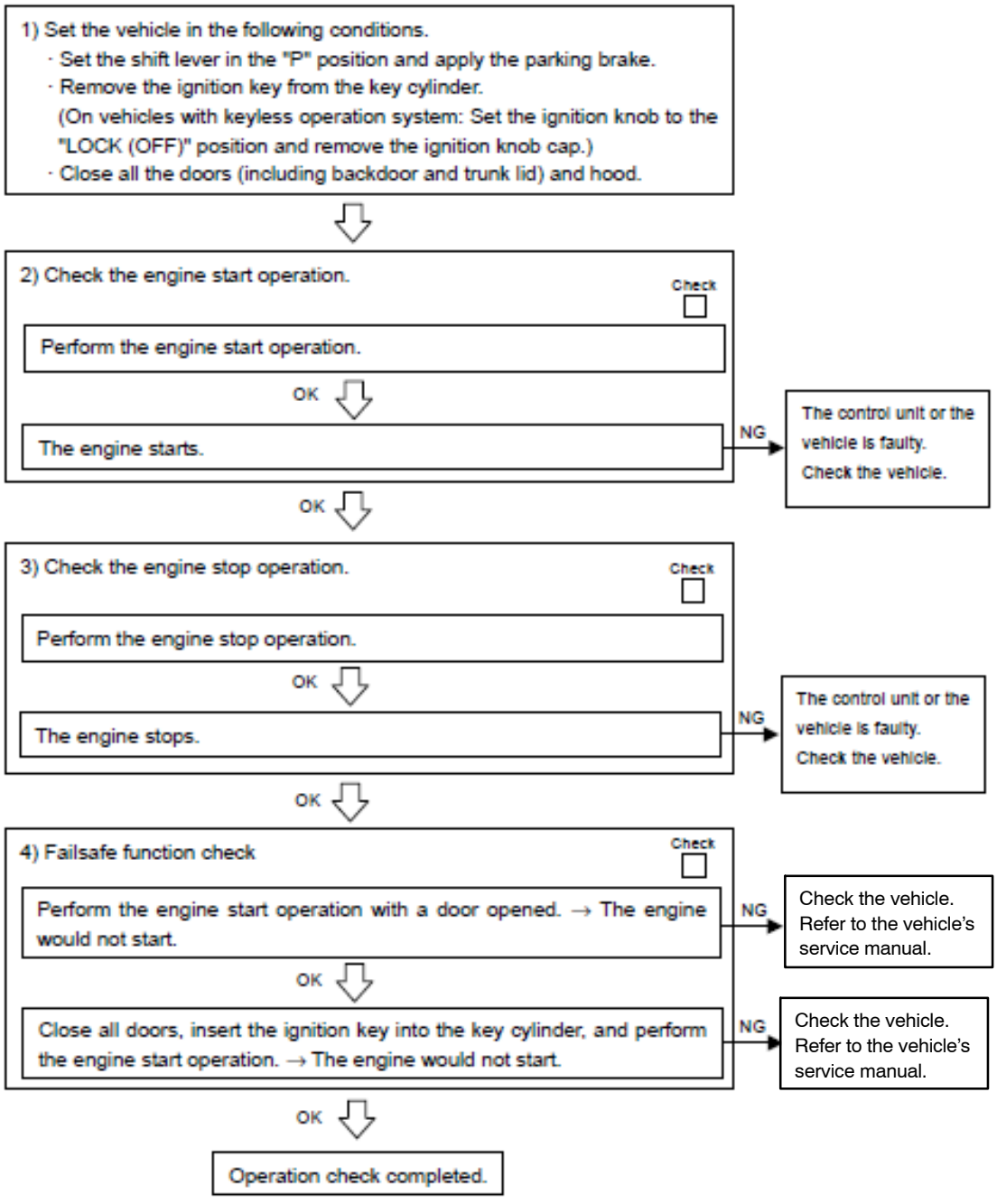
Perform Troubleshooting steps B to D and confirm proper installation of the accessory. Once confirmed, perform the operation check.

Operation Check 1:

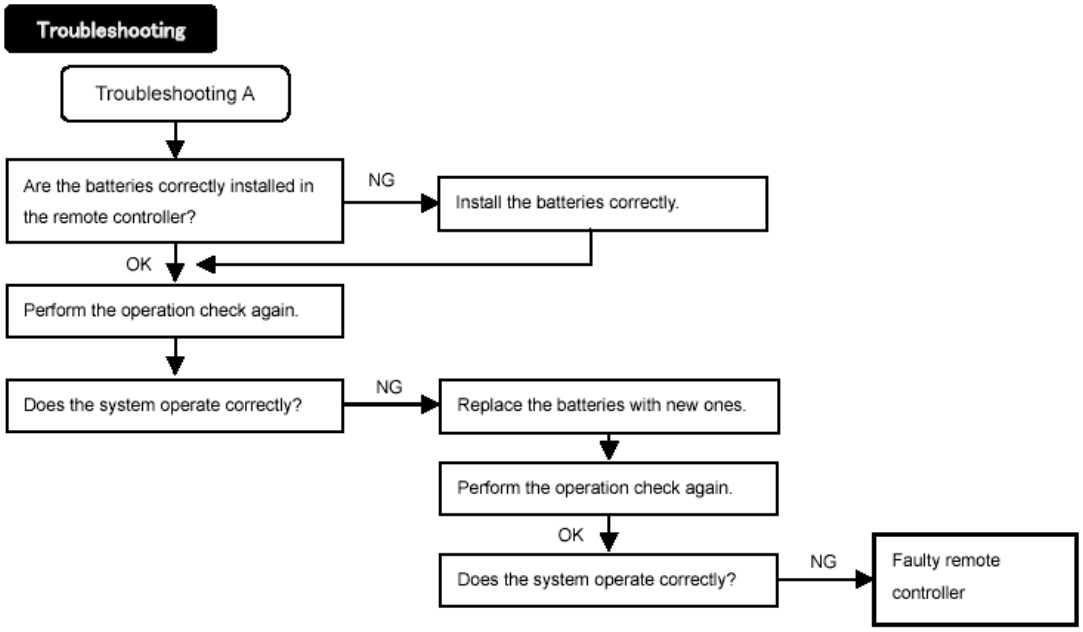


## Troubleshooting Part No. MZ360272EX (page 2 of 6)

Operation Check 2:



# Troubleshooting Part No. MZ360272EX (page 3 of 6)

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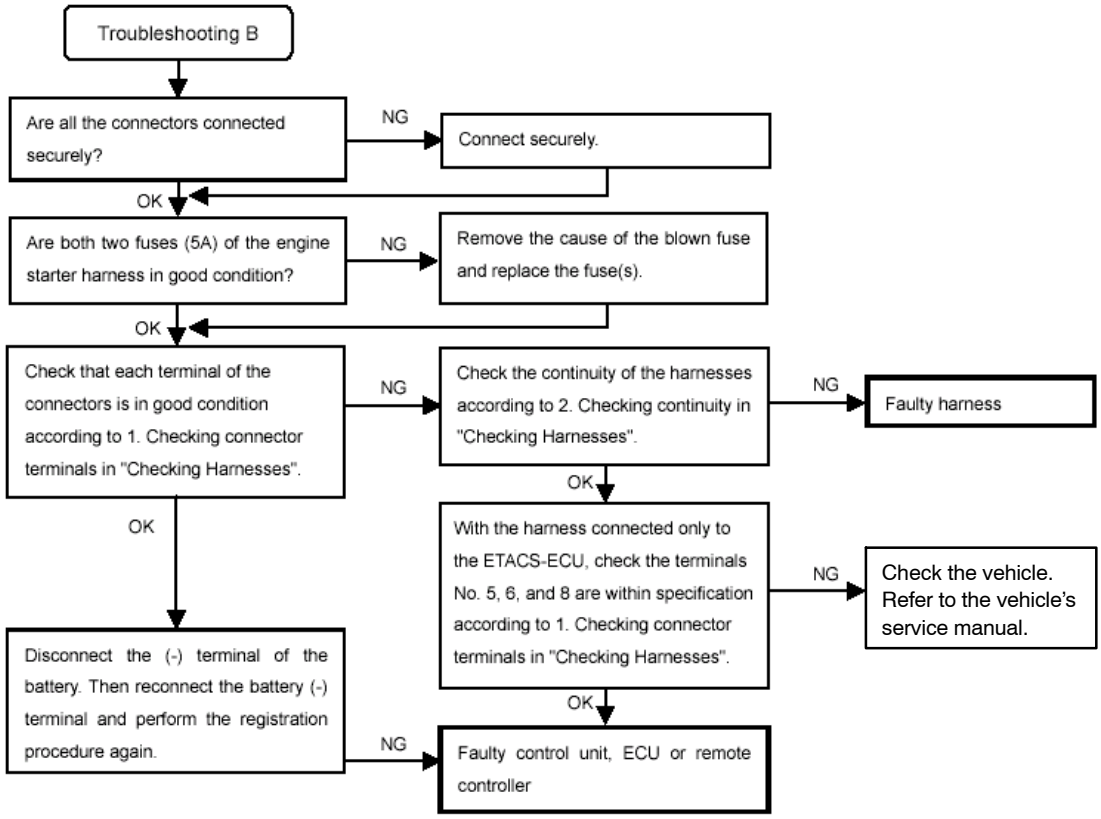
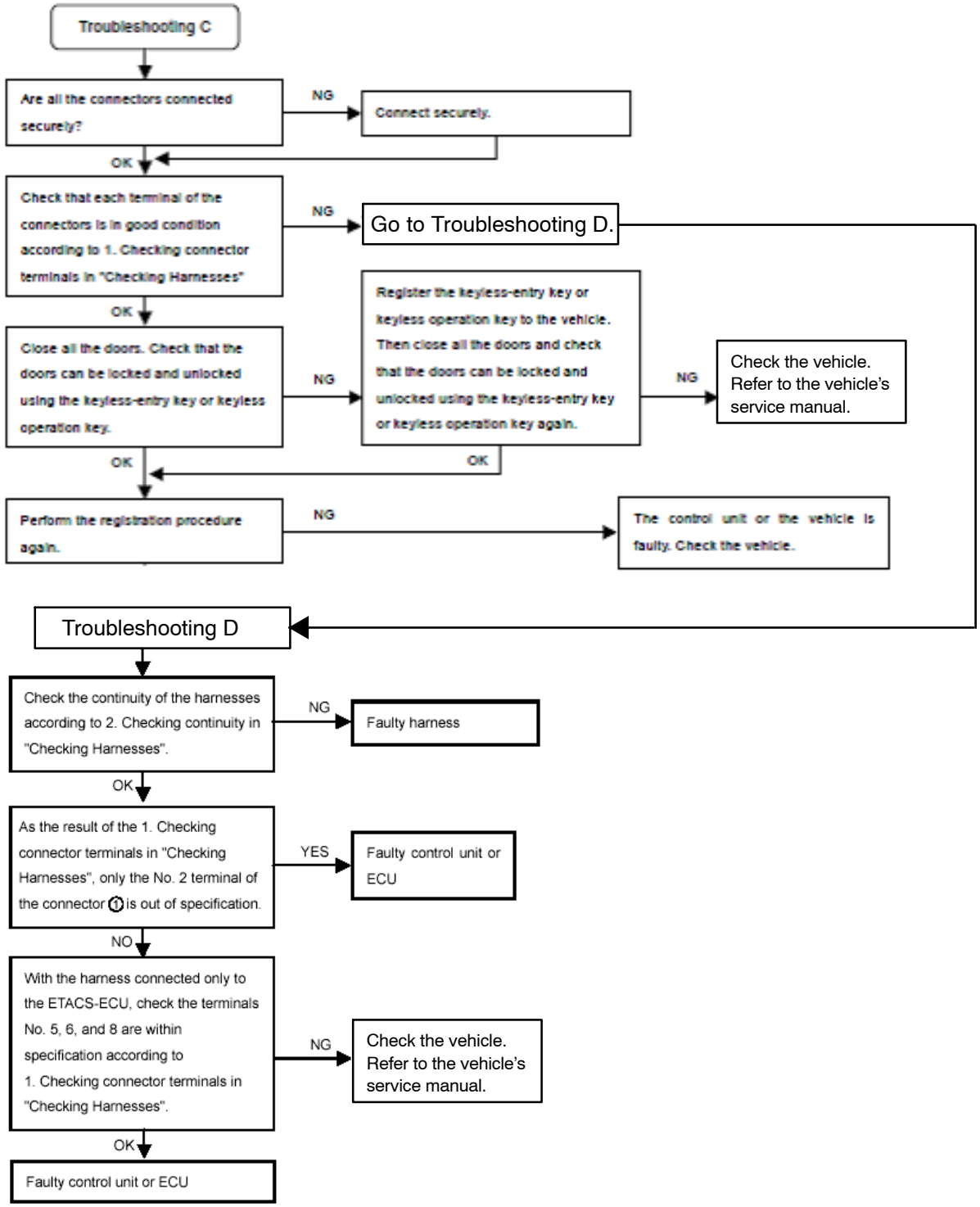
While registering the Remote Engine Start transmitter, if the Remote Engine Start ECU is found unresponsive (does not beep as indicated in the registration process), perform Troubleshooting B.



## Troubleshooting Part No. MZ360272EX (page 4 of 6)

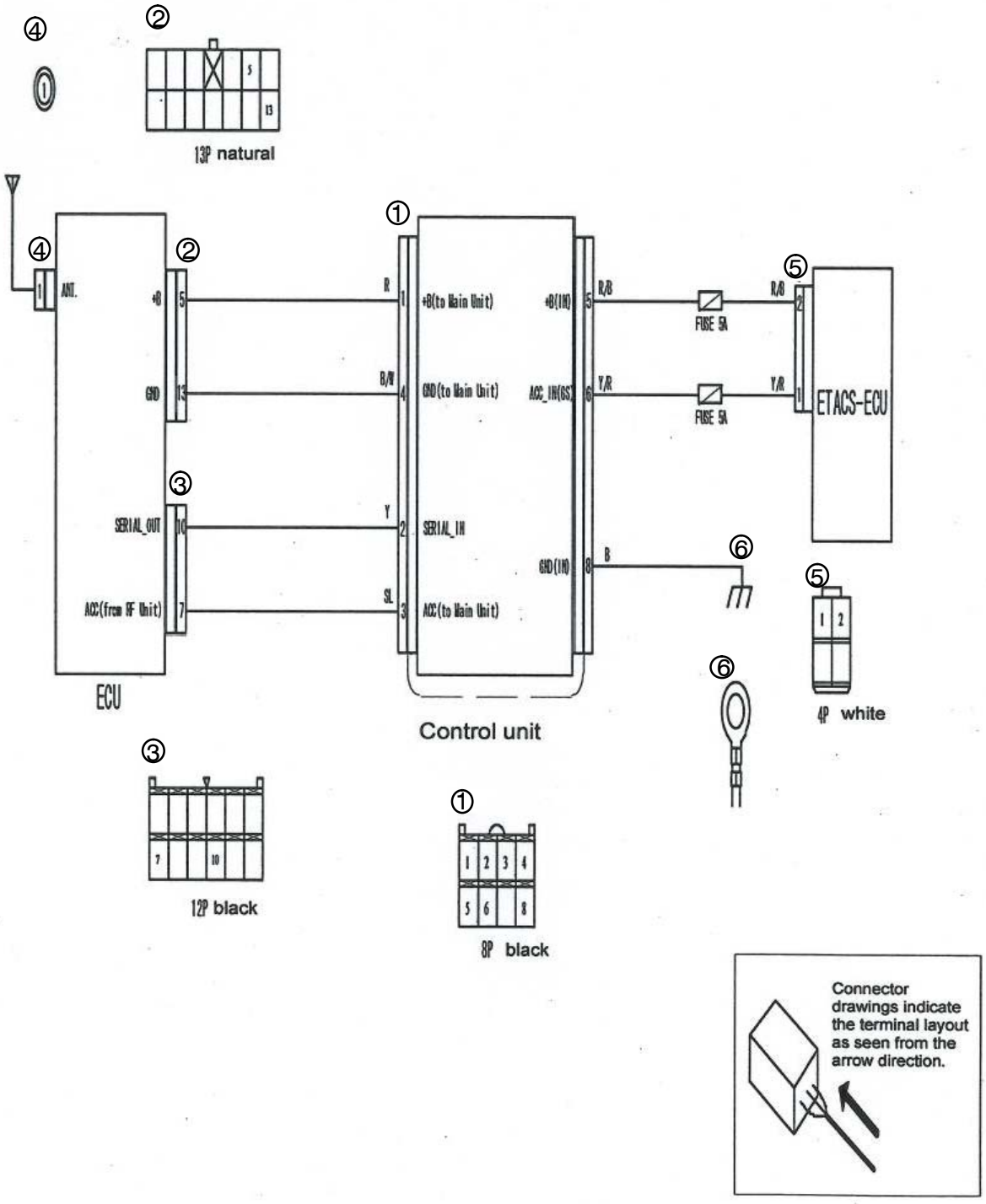
Refer to Wiring Diagram B for connector references.

While programming the Remote Engine Start transmitter, if the keyless operation key is unresponsive, perform Troubleshooting C.



# Troubleshooting Part No. MZ360272EX (page 5 of 6)

## Circuit Diagram



# Troubleshooting Part No. MZ360272EX (page 6 of 6)

## Checking Harnesses

**Note**

The probes of the multimeter must be applied from the harness side of the connector.

1. Checking connector terminals

While referring to the circuit diagram, check each terminal of the connector ① (8-pin, black) connected to the control unit in accordance with the following table using a multimeter.

| Connector No. | Terminal No. | Item | Check condition | Specification | Check |
|---|---|---|---|---|---|
| ① | 1 | Voltage between the terminal and the body ground | Any time | 10 to 14 V | |
| | 2 | Voltage between the terminal and the body ground | Within approx. 4 seconds after performing the engine stop operation in step 5) of the registration procedure. | Varies between 2.7 to 3.5 V⇔0 V | |
| | | | Other than above | 2.7 to 3.5 V | |
| | 3 | Voltage between the terminal and the body ground | Ignition key position "OFF" → "ACC" | 2.7 to 3.5 V→0 V | |
| | 4 | Continuity between the terminal and the body ground | Any time | Continuity exists. | |
| | 5 | Voltage between the terminal and the body ground | Any time | 10 to 14 V | |
| | 6 | Voltage between the terminal and the body ground | Ignition key position "OFF" → "ACC" | 0 V→10 to 14 V | |
| | 8 | Continuity between the terminal and the body ground | Any time | Continuity exists. | |

2. Checking continuity

While referring to the circuit diagram, check the continuity of harness in accordance with the following table.

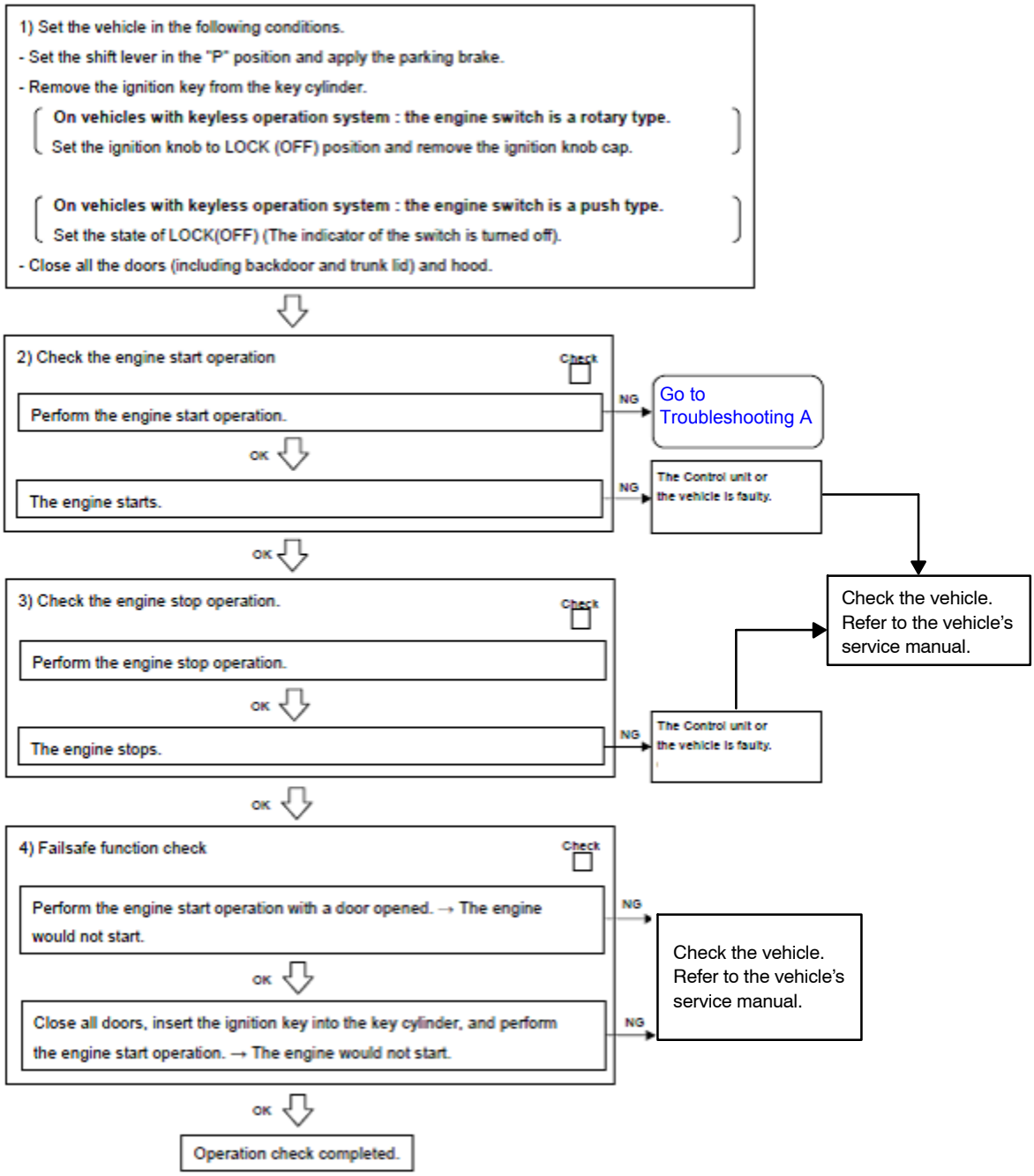
| (+) probe of multimeter to be connected | | (-) probe of multimeter to be connected | | Check |
|---|---|---|---|---|
| Connector No. | Terminal No. | Connector No. | Terminal No. | |
| ① | 1 | ② | 5 | |
| | 4 | | 13 | |
| | 2 | ③ | 10 | |
| | 3 | | 7 | |
| | 5 | ⑤ | 2 | |
| | 6 | | 1 | |
| | 8 | ⑥ | - | |

# Troubleshooting Part No. MZ360340EX (page 1 of 7)

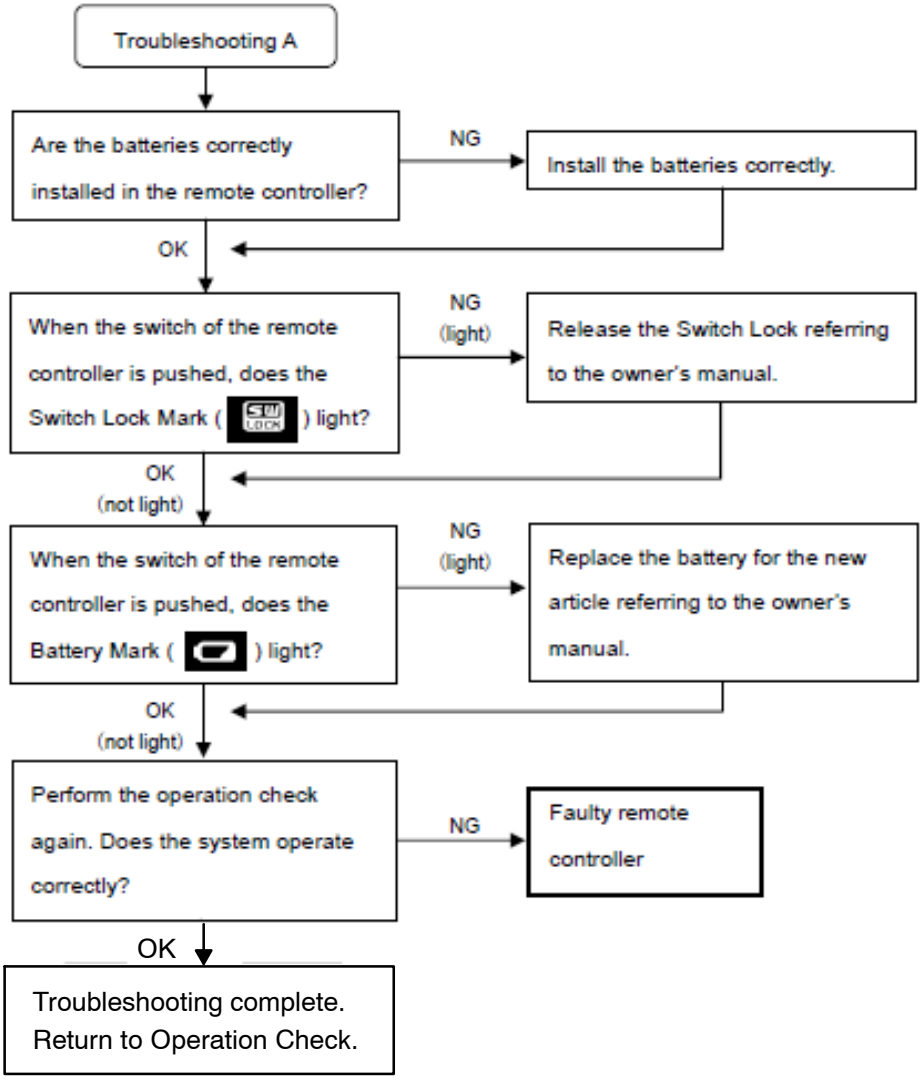
(Lancer, Lancer Sportback, Outlander, Outlander Sport)

Perform Troubleshooting B to D and confirm proper installation of the accessory. Once confirmed, perform the operation check.

Operation Check:



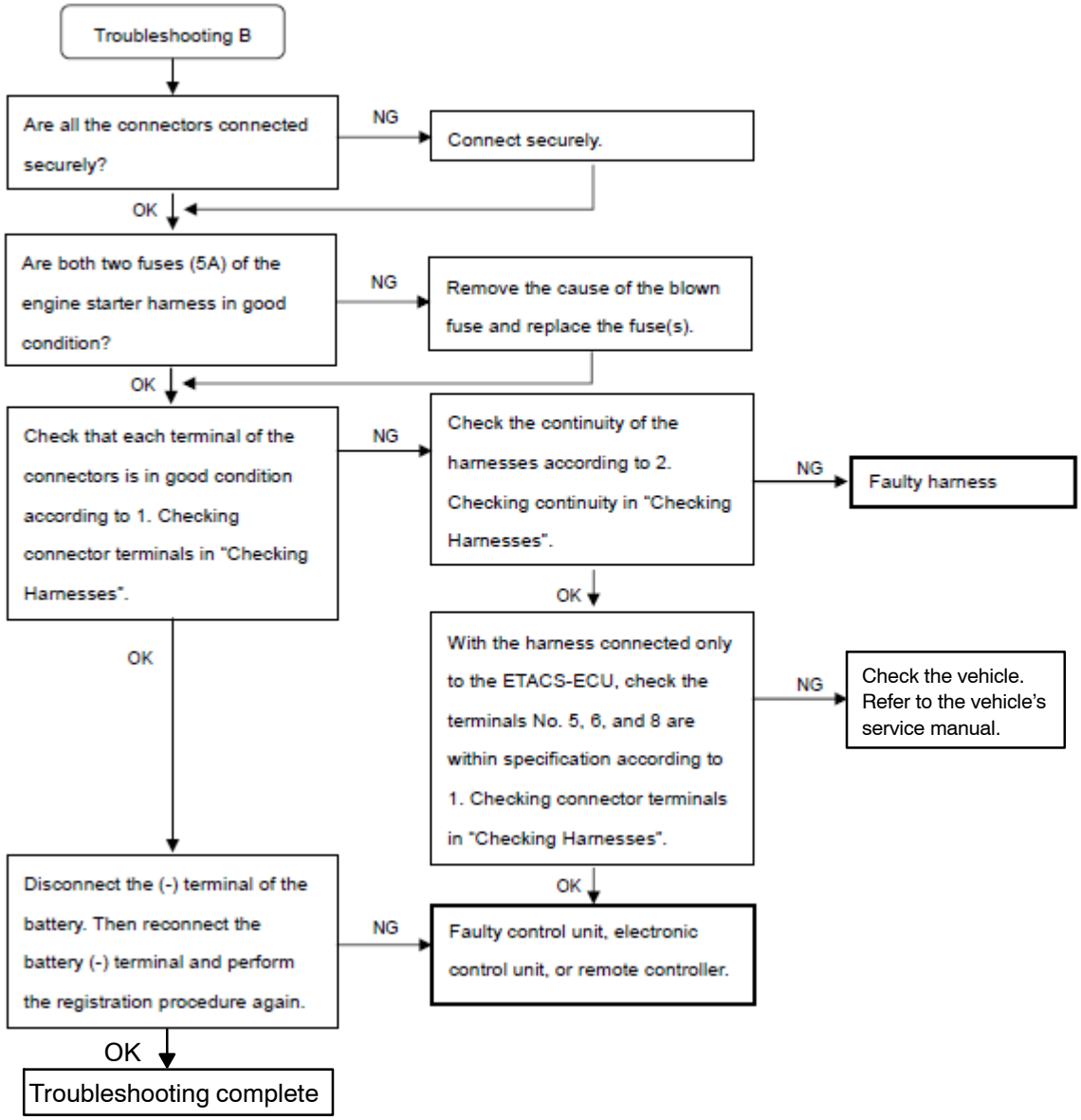
## Troubleshooting Part No. MZ360340EX (page 2 of 7)



## Troubleshooting Part No. MZ360340EX (page 3 of 7)

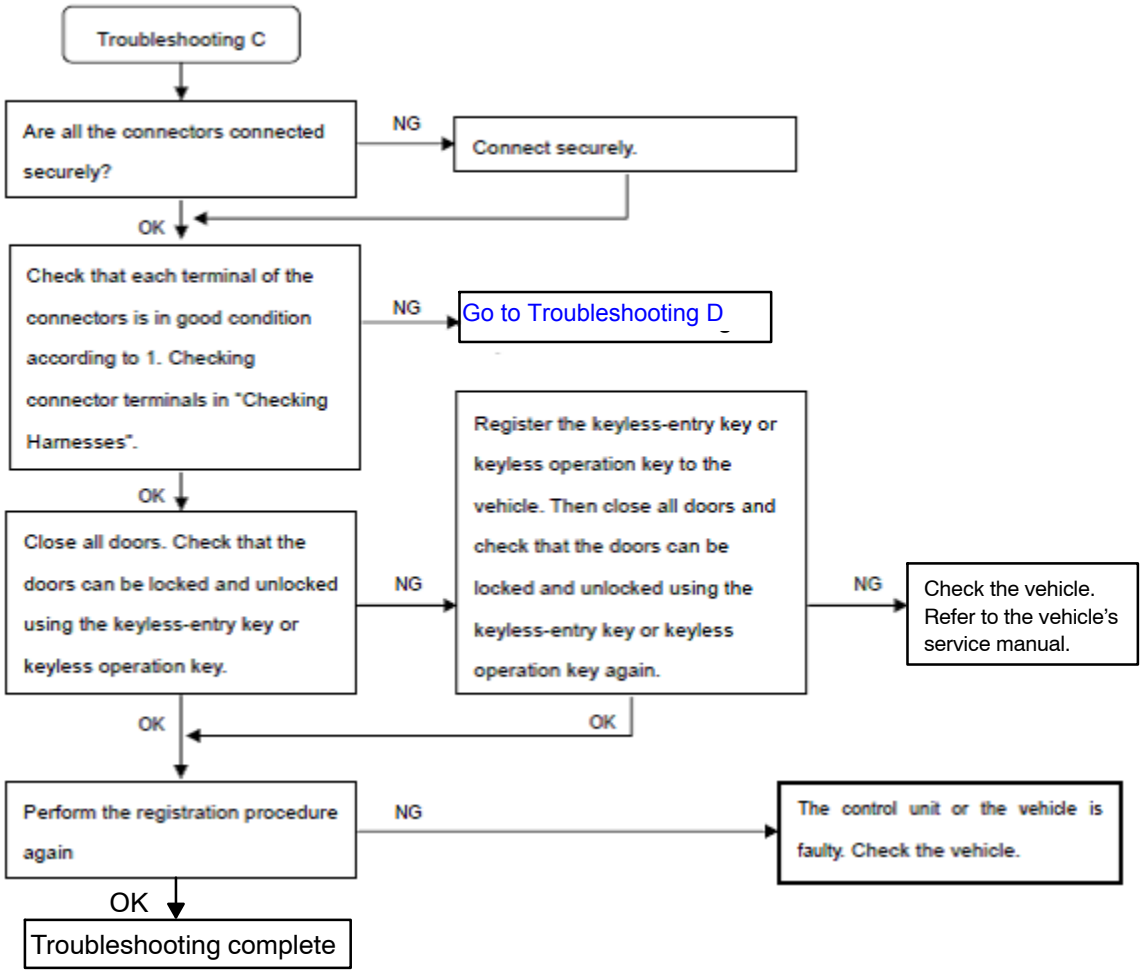
Refer to Wiring Diagram B for connector references.

While registering the Remote Engine Start transmitter, if the Remote Engine Start ECU is unresponsive (does not beep as indicated in the registration process), perform Troubleshooting B.



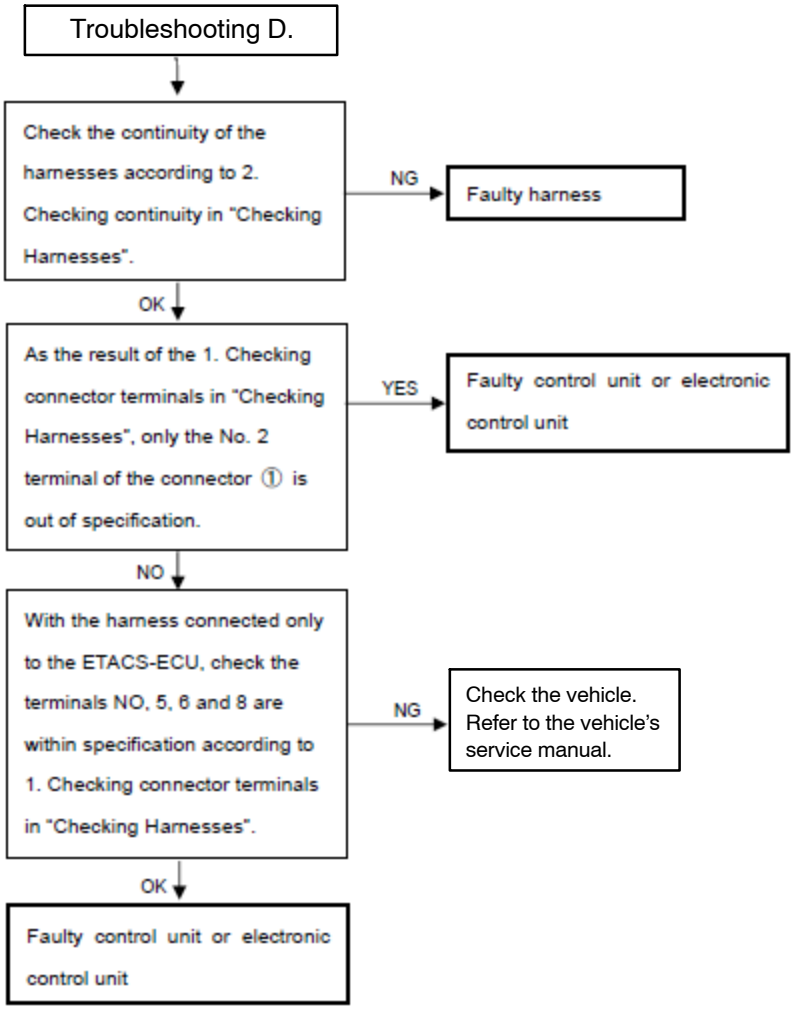
## Troubleshooting Part No. MZ360340EX (page 4 of 7)

While programming the Remote Engine Start transmitter, if the keyless operation key is unresponsive, perform Troubleshooting C.



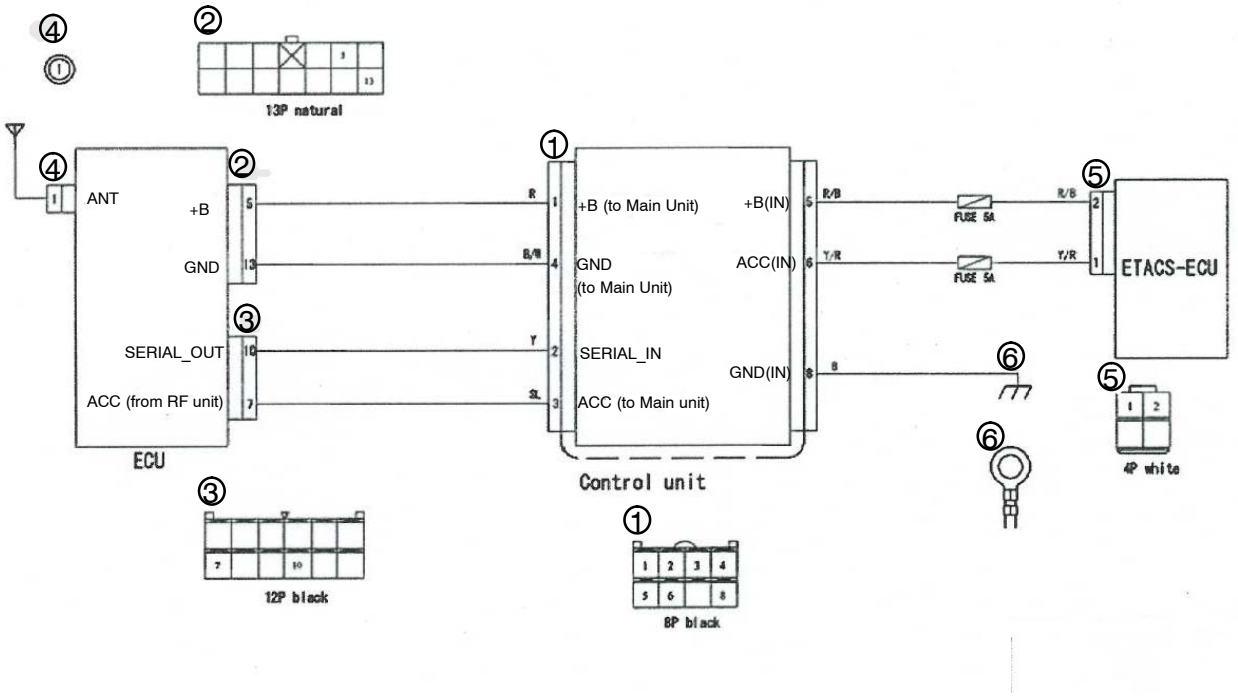
## Troubleshooting Part No. MZ360340EX (page 5 of 7)

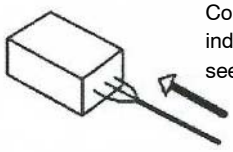
Refer to Wiring Diagram B for connector references.



# Troubleshooting Part No. MZ360340EX (page 6 of 7)

## Circuit Diagram



Connector drawings indicate the terminal layout as seen from the arrow direction.

# Troubleshooting Part No. MZ360340EX (page 7 of 7)

**Checking Harnesses**

**Note**

The probes of the multimeter must be applied from the harness side of the connector.

1. Checking connector terminals

While referring to the circuit diagram, check each terminals of the connector ① (8-pin, black) connected to the control unit in accordance with the following table using a multimeter.

| Connector No. | Terminal No. | Item | Check condition | Specification | Check |
|---|---|---|---|---|---|
| ① | 1 | Voltage between the terminal and the body ground | Any time | 10 to 14V | |
| | 2 | Voltage between the terminal and the body ground | Within approx. 4 seconds after performing the engine stop operation in step 7) of the registration procedure. | Varies between 2.7 to 3.5V⇔0V | |
| | | | other than above | 2.7 to 3.5V | |
| | 3 | Voltage between the terminal and the body ground | Ignition key position "OFF" → "ACC" | 2.7 to 3.5V→0V | |
| | 4 | Continuity between the terminal and the body ground | Any time | Continuity exists. | |
| | 5 | Voltage between the terminal and the body ground | Any time | 10 to 14V | |
| | 6 | Voltage between the terminal and the body ground | Ignition key position "OFF" → "ACC" | 0V→10 to 14V | |
| | 8 | Continuity between the terminal and the body ground | Any time | Continuity exists. | |

2. Checking continuity

While referring to the circuit diagram, check the continuity of harness in accordance with the following table.

| (+) probe of multimeter to be connected | | (-) probe of multimeter to be connected | | Check |
|---|---|---|---|---|
| Connector No. | Terminal No. | Connector No. | Terminal No. | |
| ① | 1 | ② | 5 | |
| | 4 | | 13 | |
| | 2 | ③ | 10 | |
| | 3 | | 7 | |
| | 5 | ⑤ | 2 | |
| | 6 | | 1 | |
| | 8 | ⑥ | - | |

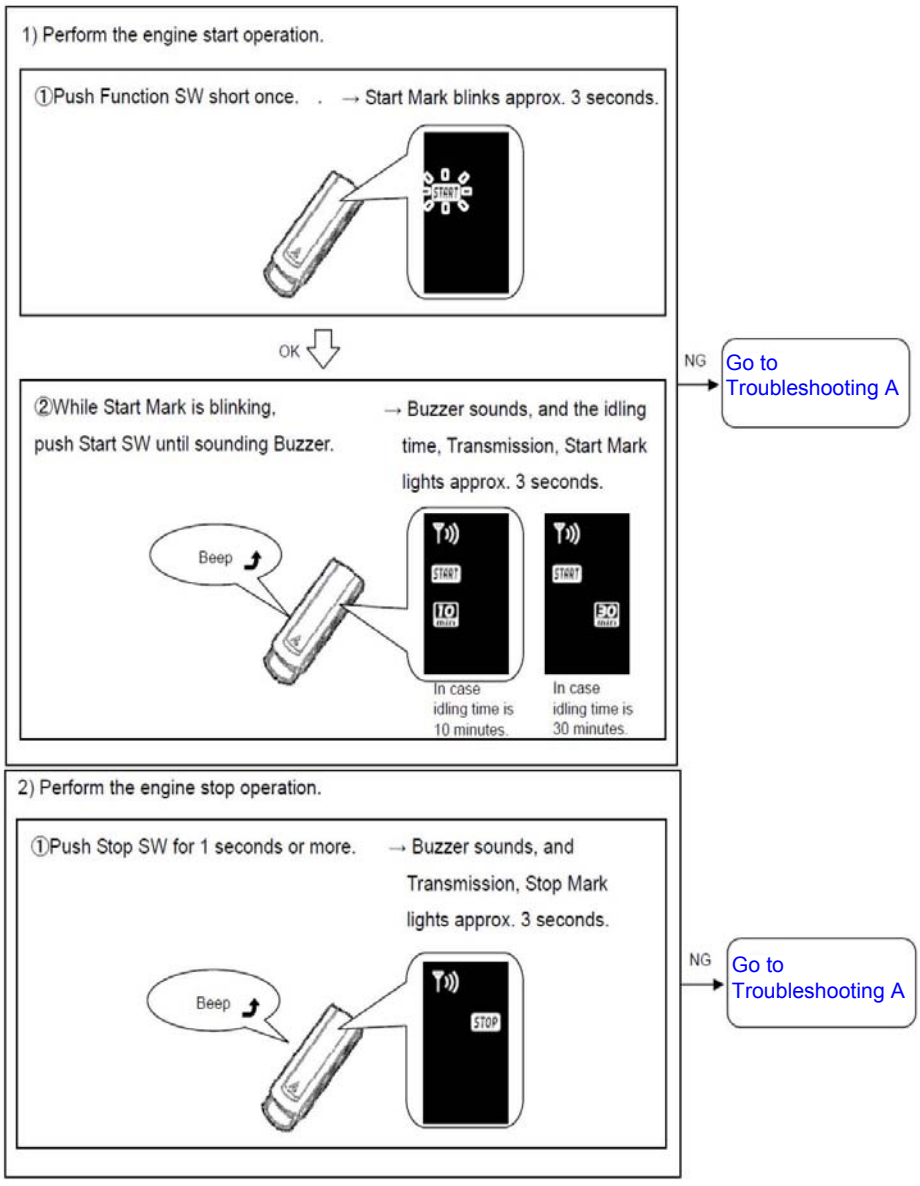
# Troubleshooting Part No. MZ360360EX (page 1 of 11)

(Eclipse/Spyder, Galant, Endeavor)

Note: On Endeavor models, be sure to set the interior light switch to the “ROOM” position before proceeding.

Perform troubleshooting E to L and confirm proper installation of the accessory. Once confirmed, perform operation check.

Operation Check 1:

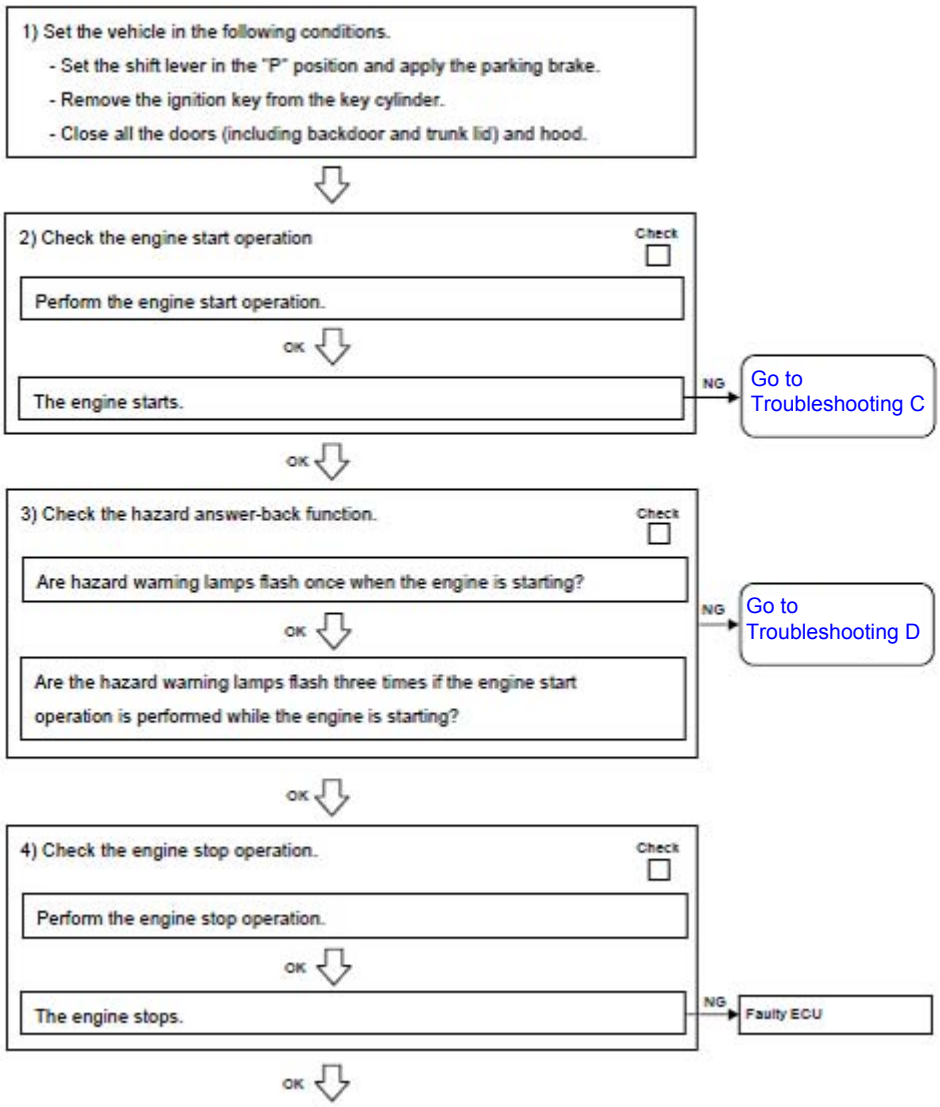



(continued on next page)

# Troubleshooting Part No. MZ360360EX (page 2 of 11)

(Eclipse/Spyder, Galant, Endeavor)

Operation Check 2:

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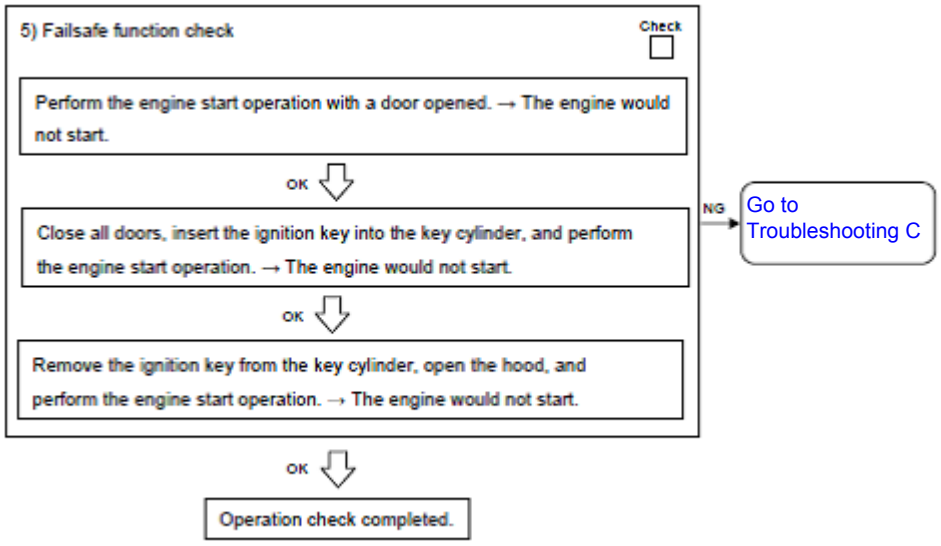
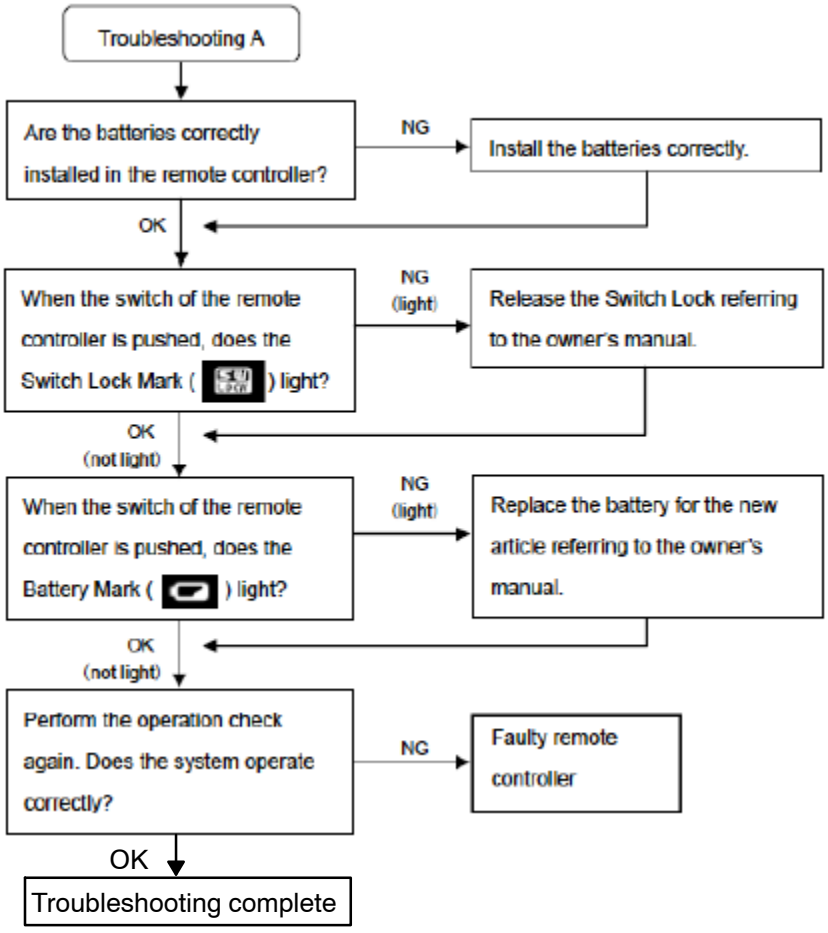
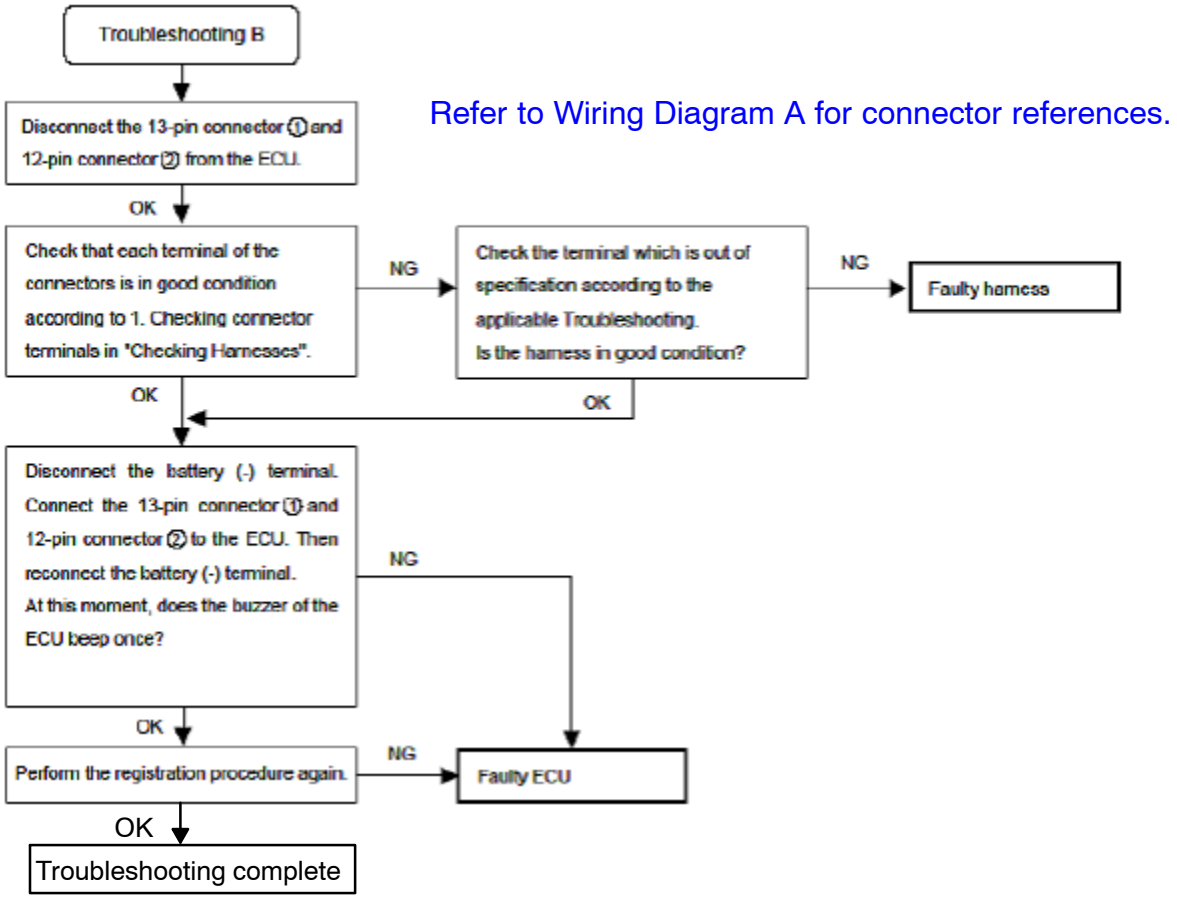
# Troubleshooting Part No. MZ360360EX (page 3 of 11)



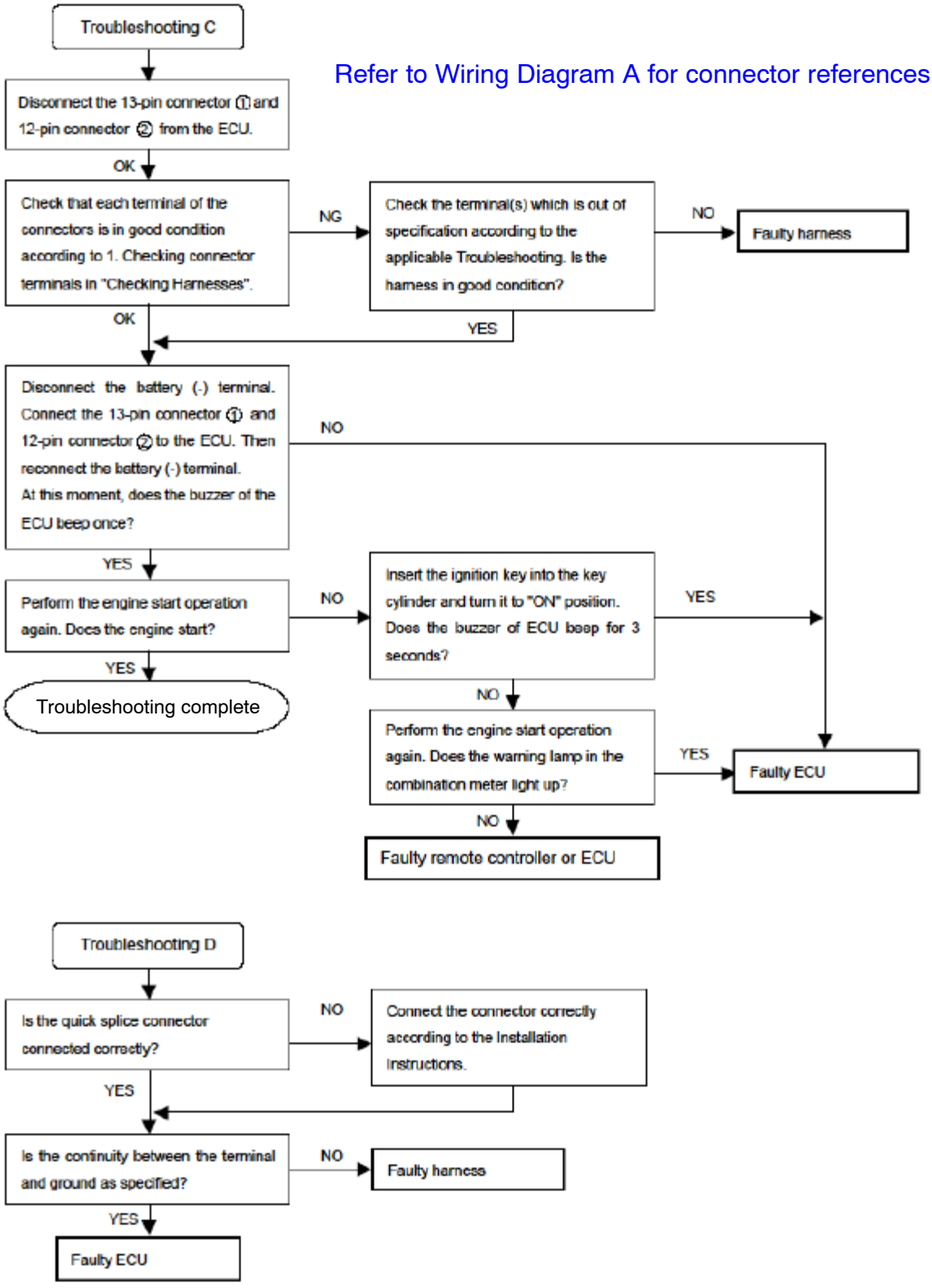



## Troubleshooting Part No. MZ360360EX (page 4 of 11)




Refer to Wiring Diagram A for connector references.

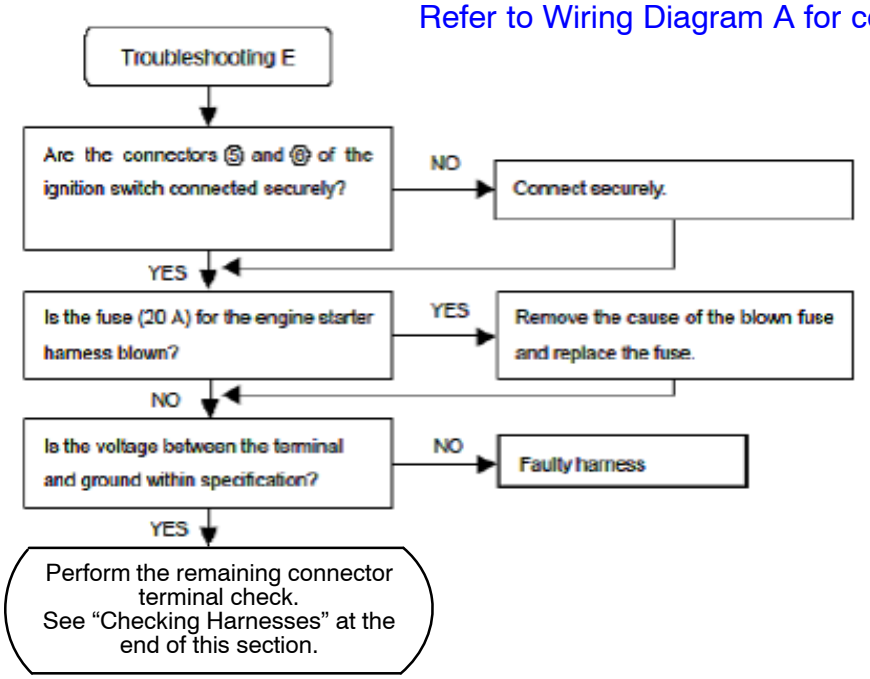
## Troubleshooting Part No. MZ360360EX (page 5 of 11)

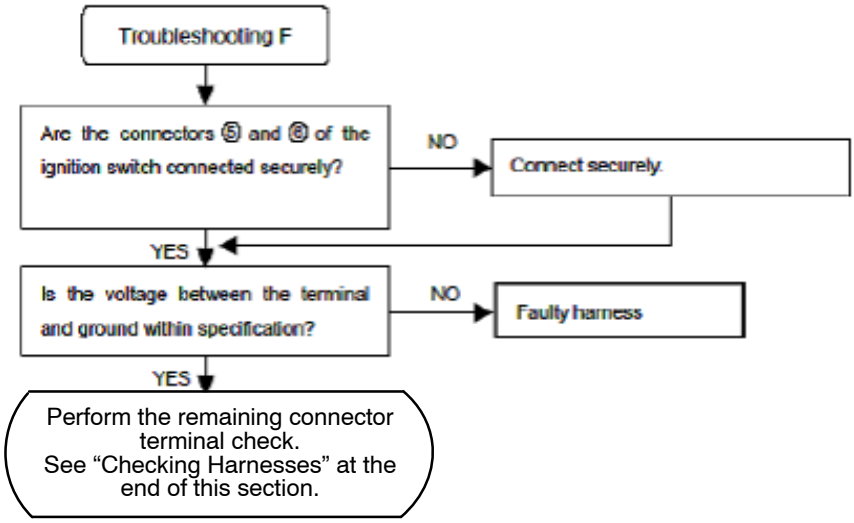


## Troubleshooting Part No. MZ360360EX (page 6 of 11)

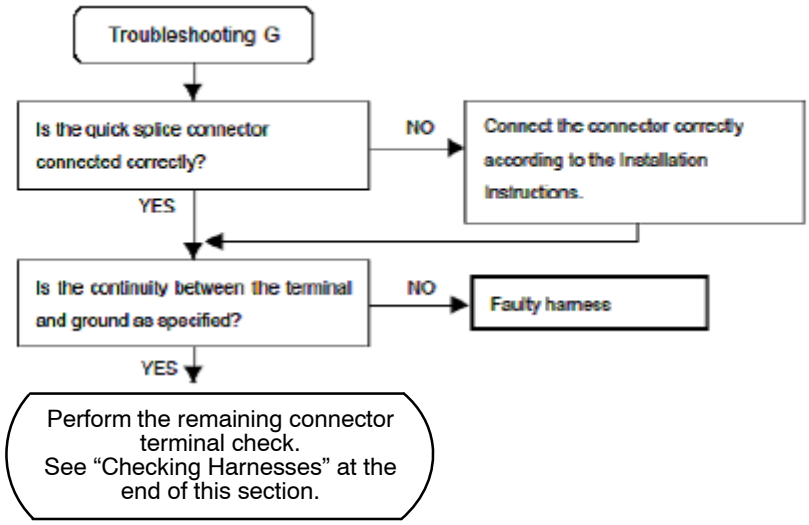
If the vehicle does not have a 20A fuse for the engine starter harness, go to Troubleshooting F.

Refer to Wiring Diagram A for connector references.



## Troubleshooting Part No. MZ360360EX (page 7 of 11)

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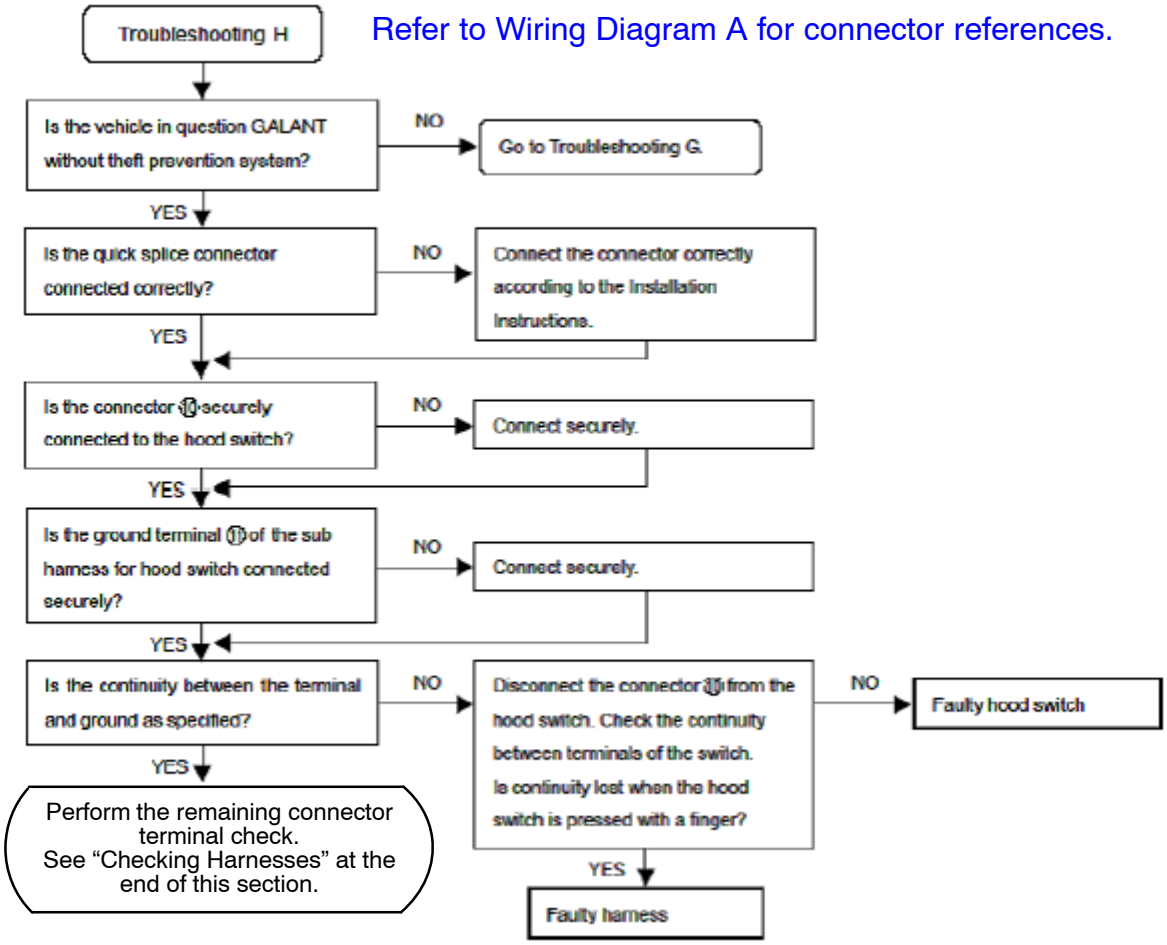
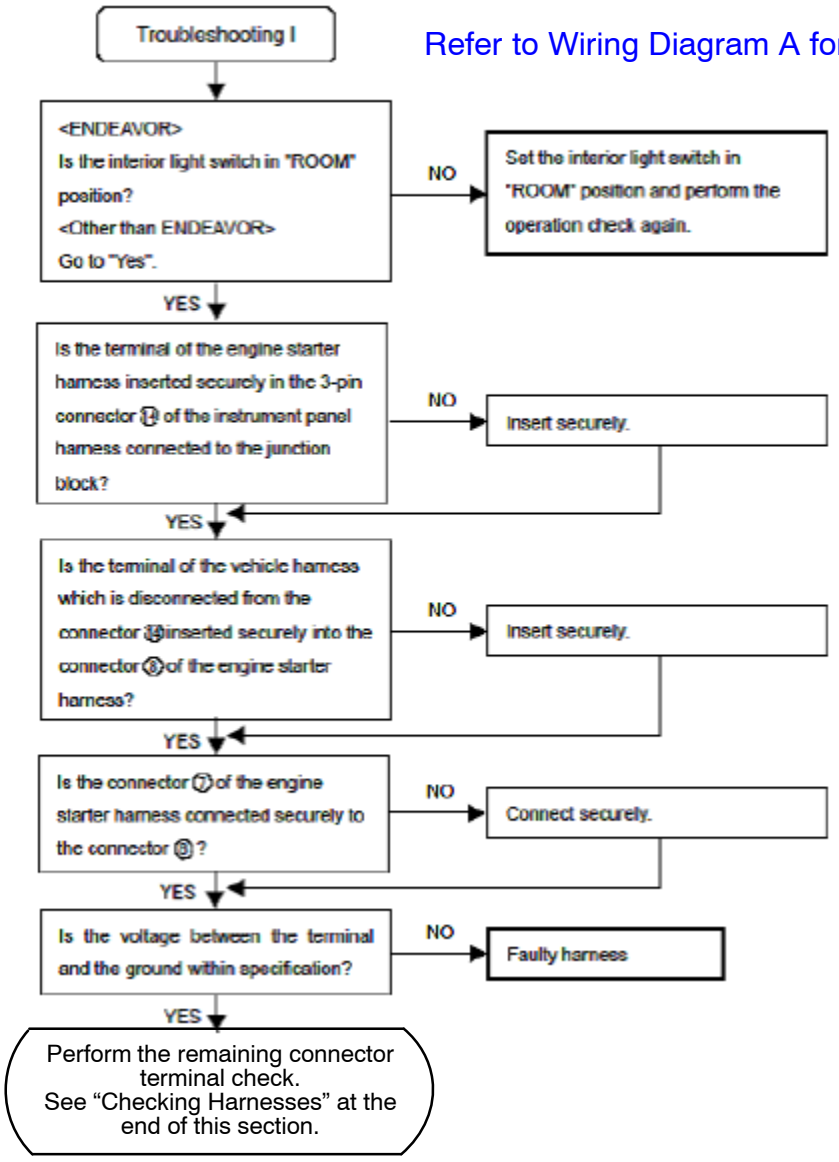
If the vehicle is a Galant, go to Troubleshooting H.

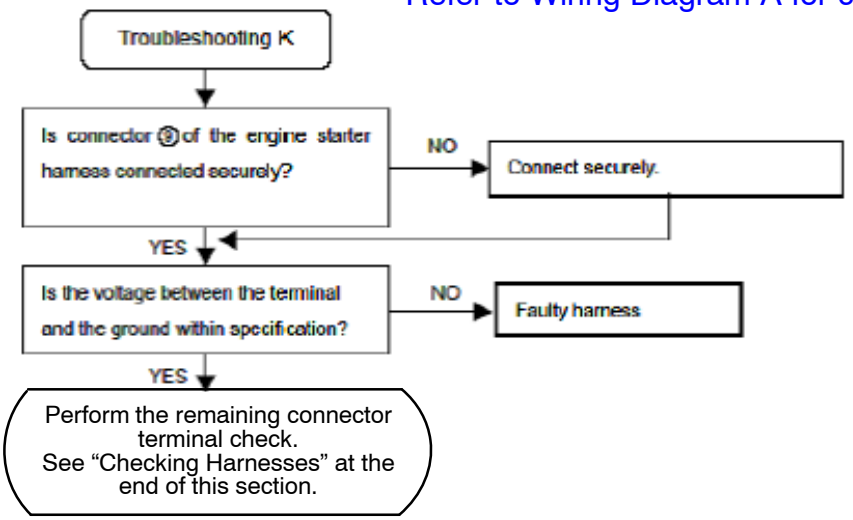


## Troubleshooting Part No. MZ360360EX (page 8 of 11)



## Troubleshooting Part No. MZ360360EX (page 9 of 11)

Refer to Wiring Diagram A for connector references.

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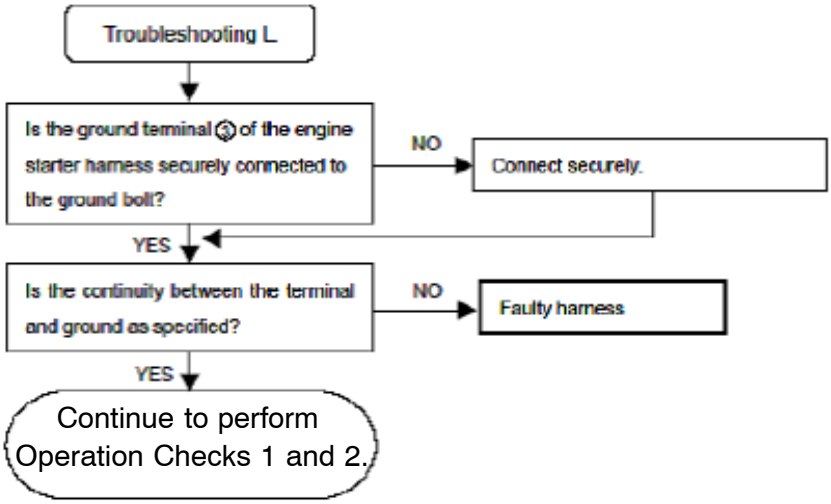
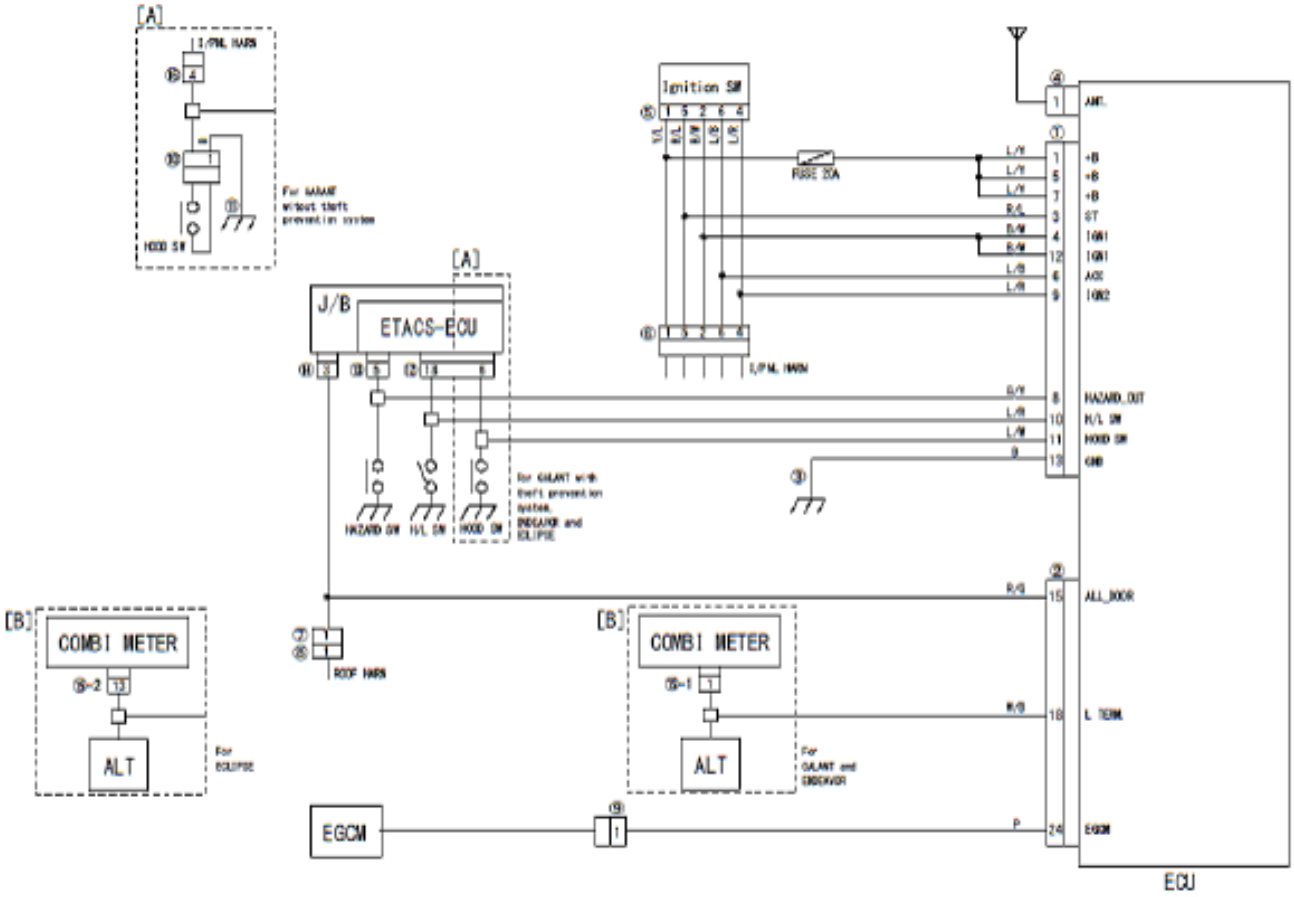


# Troubleshooting Part No. MZ360360EX (page 10 of 11)

## Circuit Diagram



# Troubleshooting Part No. MZ360360EX (page 11 of 11)

## Checking Harnesses

**Note**

The probes of the multimeter must be applied from the harness side of the connector.

1. Checking connector terminals

Check that the battery voltage is 10 V or higher. Then, while referring to the circuit diagram, check each connector of the connector ①(13-pin, natural) and the connector ②(12-pin, black) connected to the ECU in accordance with the following table using a multimeter.

If any terminal is out of specification, perform the applicable troubleshooting shown in the table.

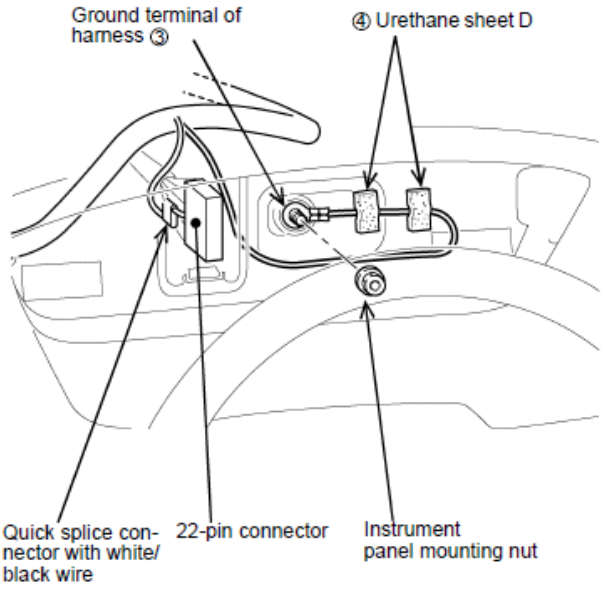
| Connector No. | Terminal No. | Item | Check condition | Specification | Check | Trouble-shooting |
|---|---|---|---|---|---|---|
| ① | 1,5,7 | Voltage between the terminal and the body ground | Any time | 10 to 14 V | | E |
| | 3 | Voltage between the terminal and the body ground | Ignition key position "ON" → "ST" | 0 V→10 to 14 V | | F |
| | 4,12 | Voltage between the terminal and the body ground | Ignition key position "ACC" → "ON" | 0 V→10 to 14 V | | F |
| | 9 | Voltage between the terminal and the body ground | Ignition key position "ACC" → "ON" | 0 V→10 to 14 V | | F |
| | 6 | Voltage between the terminal and the body ground | Ignition key position "OFF" → "ACC" | 0 V→10 to 14 V | | F |
| | 8 | Continuity between the terminal and the body ground | Hazard warning lamp switch "OFF" → "ON" | No continuity → Continuity exists | | G |
| | 10 | Continuity between the terminal and the body ground | Insert the ignition key into the key cylinder. → Remove the key. | No continuity → Continuity exists | | G |
| | 11 | Continuity between the terminal and the body ground | Hood closed → Opened | No continuity → Continuity exists | | H |
| | 13 | Continuity between the terminal and the body ground | Any time | Continuity exists | | L |
| ② | 15 | Voltage between the terminal and the body ground | All door closed → A door opened (Perform on every door.) | 10 to 14 V→0 V | | I |
| | 18 | Voltage between the terminal and the body ground | Ignition key in "ON" position → Start the engine using ignition key. | 0 V→10 to 14 V | | J |
| | 24 | Voltage between the terminal and the body ground | Ignition key position "ACC" → "ON" | 0 V→10 to 14 V | | K |

# Correction to Remote Engine Start Installation Instructions for Eclipse/Spyder/Endeavor

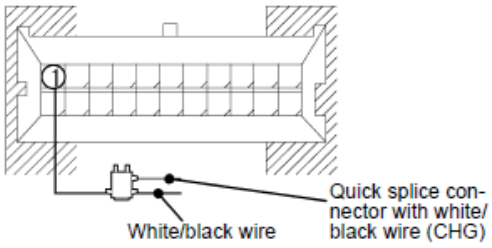
**Remote Engine Start (MZ360271EX & MZ360360EX) Instructions Correction – 2009 & later Endeavor, 2010 & later Eclipse/Eclipse Spyder.**

Wire color descriptions in the installation instructions for the section “ROUTING THE HARNESS TO THE COMBINATION METER” are incorrect *for* ***affected vehicles listed above only.*** The wire colors in the pin diagram are correct.

## H. ROUTING THE HARNESS TO THE COMBINATION METER




22-pin connector




correction: white/black

1) Route the quick splice connector with white/black wire and the ground terminal of the harness ③ to the combination meter.
2) Connect the quick splice connector with white/black wire to the ~~black/white~~ wire from the No. 1 terminal of the 22-pin connector for combination meter.
3) Tighten the ground terminal of the harness ③ with the instrument panel mounting nut as shown in the drawing.

**Note**

**Refer to the workshop manual for the tightening torque of the mounting nut.**

4) Cut the urethane sheet D ④ into several pieces and fix the ground terminal wire to the instrument panel with them to prevent the wire from dangling.

If you cannot program the Remote Engine Start, or if the engine will not start with the transmitter, confirm the proper wire routing.

## Additional Resources

1. Remote Engine Start installation and basic troubleshooting information are on the Mitsubishi Dealer Link:

    a. Log onto the Mitsubishi Dealer Link.
    b. Under the "**Parts**" tab, click on "**accessories**".
    c. On the left side of the screen, click on "**Parts & Accessories Guide**".
    d. Select the appropriate vehicle model year.
    e. Enter the Remote Engine Start Kit part number (see part number listing earlier in this bulletin).

2. Remote Engine Start informational **videos** for some models are on the Mitsubishi Dealer Link:

    a. Log onto the Mitsubishi Dealer Link.
    b. Under the "**Service**" tab, click on "**systems**".
    c. On the left side of the screen, click on "**Techline Videos**".
    d. The videos will be listed on the left menu bar. Click on the desired video link.

## WARRANTY INFORMATION

This TSB provides technical information only.